FLOOR PLAN
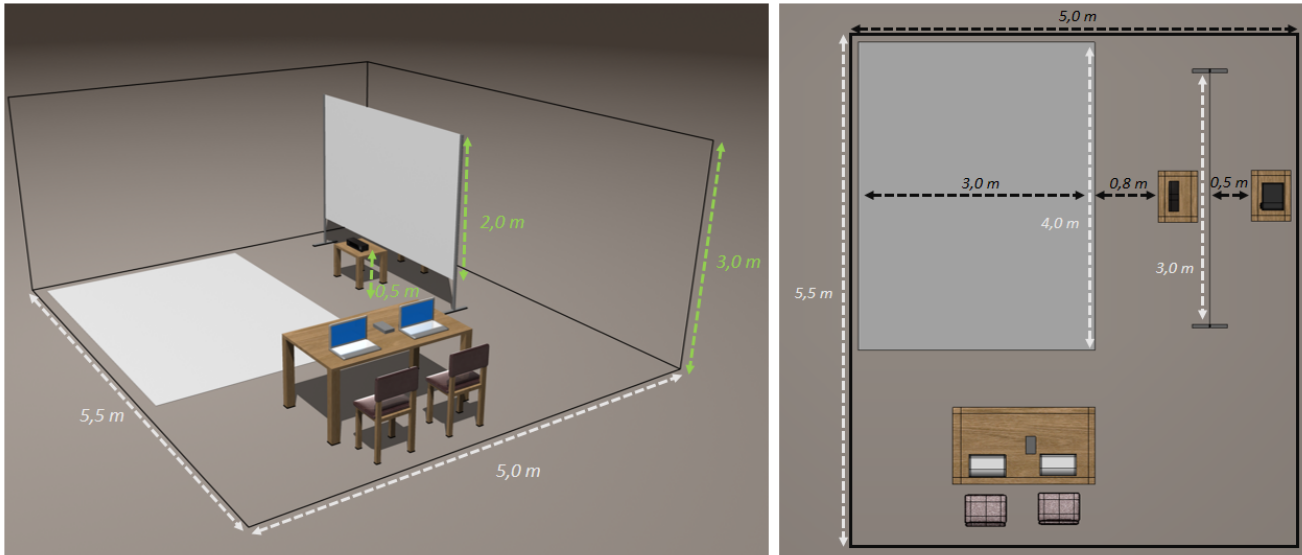# Living Book of Anatomy Project : See your Insides in Motion!

Figure 1: *Diagrams for space utilization*

Abstract

We present the Living Book of Anatomy project (LBA), an augmented reality (AR) system for teaching anatomy : specifically anatomy in motion. By using a Kinect sensor to acquire user motion and gestures, we superimpose our 3d highly-detailed anatomical model (bones, muscles, organs, *etc*) onto the user's color map in real-time and we animate it.

By showing our work, we hope to have interesting feedback from Emerging Technologies attendees.

1 Demonstration space

Our demo is composed as shown in Figure 1. First, a ground carpet is used to delimit the Kinect tracking space. Then we have the Kinect itself on a stand 0.5-0.6 meters high.
Behind it, the screen in which the AR content will be projected. To avoid shadow problems we decided to place the projector behind the screen.

As described on Figure 1, we need 5.5 per 5.0 meters of floor plan and 3.0 meters under ceiling for our demo.
To minimize the floor space needed we decided to use a small focal length projector : space needed onbetween the screen and the projector is between 0.4 and 0.8 meters. To limit space under ceiling we choosed our material to be without suspension needs.

2 Power, light and sound

To power all our material, we will need an 8 multi-socket adaptor compatible with european socket norms. There is no light requirements for our demo, but we would like to avoid lighting directed to the depth sensor. We intend to diffuse sounds during the demo using speakers placed at each side of the screen.

3 Material and transport

The specific material for our demo will be handled by our staff during their flight to the location :

- Ground carpet
- Kinect and Kinect stand
- Screen
- Projector
- 8-multi-socket adaptor
- Speakers
- Computers

We expect Siggraph Asia staff to make available :

- 2 Power sockets (220V)
- 3 tables
- 3 chairs

A table and two chairs will be used by the LBA staff. The second table and the last chair will be used by attendees to conduct the user study. The last table will be used as stand for the projector.
We need more or less 1700W per hour to ensure our material efficiency : 600W per computer, 350W for the projector, and the rest for the small material (kinect, speakers, external hard drive ...).

4   Handling the demonstration

As we said in the extended abstract, this demo can be used only with a single person at a time. To prevent wating time, we decided to stop user experience after 3 minutes.
To minimize the LBA staff's burden, the demo will be handed as a video : we will include all the necessary knowledge for the best user's experience and with no need for the staff to step in.

We choosed our material so that our demo can be handled by an only person, from installation to attendees reception and experiment. But we will have two LBA staff almost all the time to be able to conduct the user study

The time for demo installation is estimated to be between 30 and 60 minutes. To make sure our demo si available during all Emerging Technologies open hours, we will send at leat three LBA staff to take turn on the booth. Having a Student Volunteer on the booth would be of great help.