

# SIDeR 2012 Workshop

*Concept by Group 17*

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## **Concept - Experience Pro Skiing**

### **Description**

The concept consists of two parts; tracking of the athletes and a simulator.

The tracking of the athletes are done by installing accelerometers and gyroscopes in the skies and the ski sticks of the athletes competing on the slope as well as a GPS for tracking real time position. The collected data is time coded, so a precise mapping of the athletes performance down the slope can be recreated for a computer simulation.

Installing the sensors in only the skies and sticks offers a minimum of interference with the athletes ability to perform their best in the competition.

The simulator is a setup that allows the people at the event to compete with or learn from the athletes participating in the competitions. The setup consists of a skiing simulator rig in front of a big screen and a Microsoft Kinect sensor for input of the user's movements. Users can then choose between two experience modes; they can either try to compete with the athlete in a race

down the same slopes that are at the event, or they can choose to try and learn from the athlete in a slowed down version of the athletes latest run down the slopes.

In the fast paced mode, where the users compete with an athlete, we intend to give the users an experience of how fast the athletes actually are, and how much it takes to perform at that level. If the users choose to, several users (in separate simulators) can compete against the same athlete and each other at the same time.

The second, slower mode, gives the user a chance to learn from the athlete and gain a better understanding of what the athlete does in specific situations. In this mode the digital character representing the athlete is skiing right in front of the user, and special characteristics of the athlete's movements are highlighted as they go down the slope. The user should then try to mimic the movements and postures of the athlete to gain points, similar dancing and music games alike. Our goal with this mode is to let the users experience the precision and timing involved in skiing at a professional level and giving them an even better understanding of what is going on on the slopes.

In both modes the Microsoft Kinect is used for all the tracking of the users input, and the physical parts of the simulator are simply there to give a better feeling of being on the skies.

## **Use**

The concept can be used in many scenarios, but we see the best possible use at a setting close to the actual slopes, where the users might even have seen the actual race by the athletes before trying the simulator. To give an even stronger connection between the actual competition, the athletes and the use of the simulator, we suggest using the user's ticket to track which races they have seen and through that information decide which athletes they are allowed or encouraged to interact with in the simulator.