

BOARDCAPTURE

A FRESHDEUCE
AND
O'NEILL EUROPE
PRODUCTION



STUDENTS
WANTED

RFID-ENABLED TRACKING of SNOWBOARDERS, FILMING and AUTOMATIC VIDEOCLIP GENERATION

Project objective: develop software and hardware to trace snowboarders in snow- and funparks, digitally film their jumps and process this footage to be viewed online, GoogleVideo-like.

The filming is initiated when a boarder, who is wearing an active-RFID badge, approaches a ramp equipped with an RFID-receiver. The jump and landing that follow need to be recorded. A basic setup of the system will involve the use of two cameras filming from fixed angles. Initially, each RFID-badge needs to be synchronized with a wearer's name and email. At the end of the day, boarders can log in to the website and view their jumps online. The best jumps can be selected to be viewed by all.

Internships: students from several disciplines will work together. We are looking for people studying or working in electrical engineering, computer science, informatics, industrial- and graphic design. The internships are:

Internship - team manager

1. Can you make sure that all project members deliver what they should and when they should? Do you have a technical background but prefer to (further) develop your social and organizational skills?

Internships - hardware

1. RFID-engineering: communicate with cameras and the BOARDCAPTURE-server.
2. RFID-informatics: calculate the RFID-distances in order to activate and control filming of boarders.

Internships - software

1. Further develop Freshdeuce motion-detection & camera control software. Or build your own. Code: C++.
2. Program the BOARDCAPTURE-server, API & database that interacts with cameras, video clip software and webserver. Code: Python. Database: PostgreSQL, Oracle or similar.
3. Program video clip generation software. Code: to be determined.
4. Program website enabling online video viewing. There's freedom for additional functions: be innovative! Collaborate with web designer(s). Code: Ajax, RubyOnRails

Internship(s) - industrial design

1. Design and create prototypes of the RFID-badges. The material needs to hold the RFID-technology and not block the signals. Badges need to be safe, flexible and feel soft but be able to survive heavy slams © And yes, make the badges look good! There's freedom for extra functions. Surprise us!

Internship(s) - web design/graphics

1. Design the website in collaboration with the web programmer(s). Be creative and surprise us!

Designs must match the O'Neill Europe look-and-feel: www.oneilleurope.com

System: the system must operate on LINUX and be Web2.0 compliant. When successful, badges will be produced in large(r) quantities and used by snowboarders internationally.

Testing: all R&D and testing will be done at a Dutch indoor snowpark. After passing the tests the system will head for the mountains. Maybe you'll be included!

Skills: if you feel that you have not yet mastered the skills desired but feel confident and enthusiastic about the task ahead: email us and describe in short why you're the one we need.

Period: internships can be 3, 6 or 9 months, part-time or full-time, depending on availability.

Contact: to apply or request additional information regarding the project or one of the internships email Daan Archer (daan@freshdeuce.org) and/or Ferry Rietveld (f.rietveld@hva.nl). You can also visit www.freshdeuce.org for information and our contact details.

The Freshdeuce Foundation is part of the Amsterdam School of ICT and is located in Amsterdam, The Netherlands.

