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Awarded Virtual University group (TaY 2016) writes about their project

Tämä on Pitkyn stipendillä vuonna 2016 palkitun TaY:n Virtual University -projektiryhmän kertomus projektistaan.

This is the story of UTA's Virtual University group, which was awarded Pitky's stipend in 2016

Virtual University



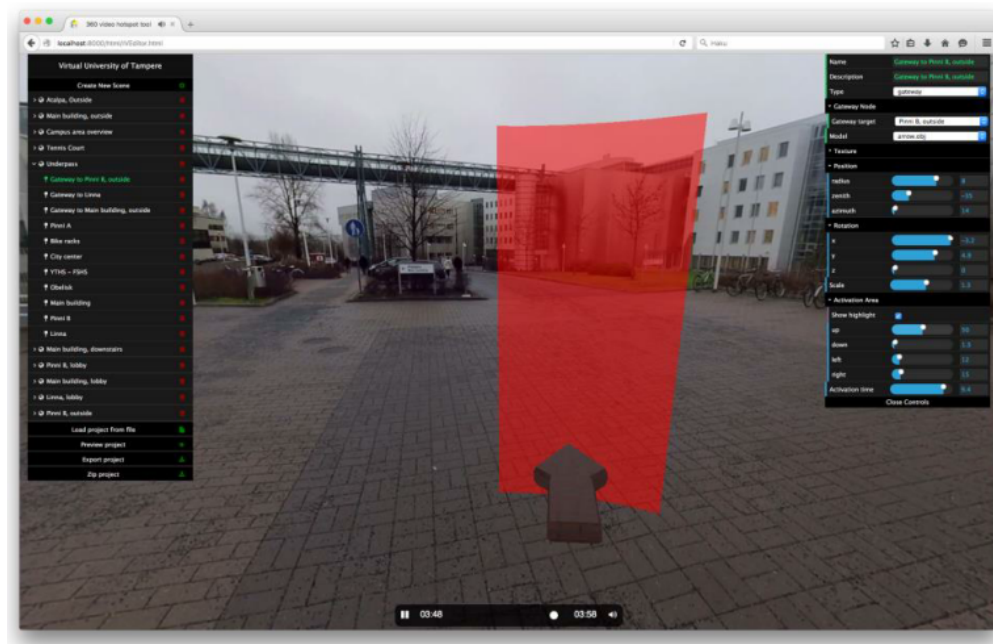
Virtual University started off as an endeavour to create a highly interactive tour of the university of Tampere (and by extension, any other location), by making use of the latest in the fields of augmented and virtual reality.

Due to the fact that nothing of the kind had been done before, the project only had a few basic requirements to fulfil. This meant that there was a great sense of freedom and experimentation and the team would be free to take the project in whichever way they imagined, so long as the main, fundamental requirements were fulfilled.

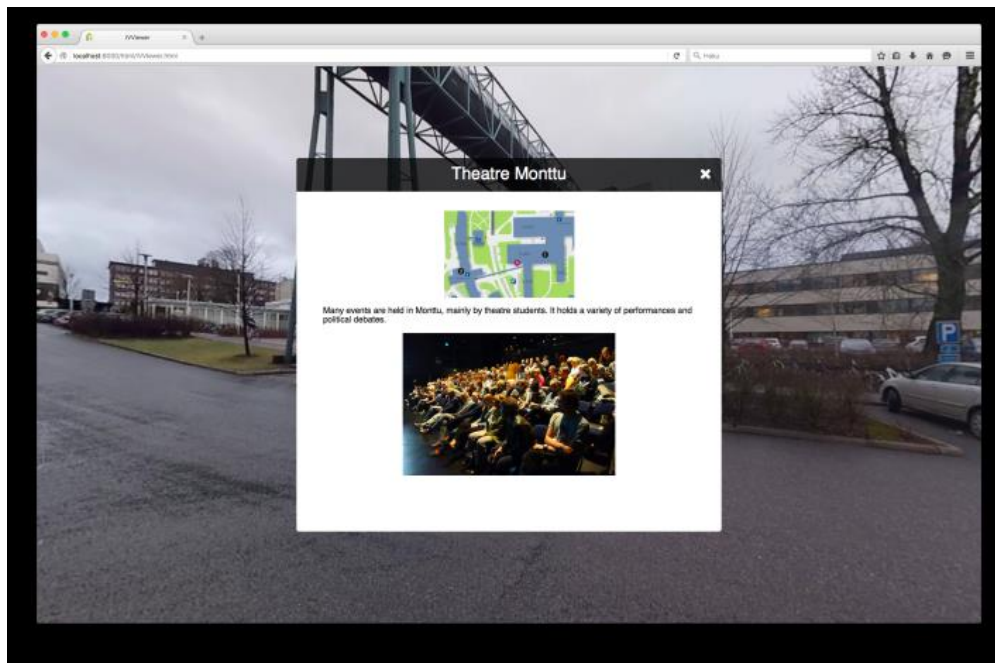
The idea was to develop an application that would allow for not just the playing of 360-degree videos, but also editing them, and this is where the core functionality of the project comes in. In order to make videos interactive, adding points of interest, or “hotspots” to each video, was the main requirement of editing. When the user interacted with those hotspots, certain events would take place, such as opening a dialogue to display information to the user. Here the team exercised its full potential in both imaginative and technical respects.

The resulting application is named the “Interactive Video Editor”, or IVE. The editor is mainly written in JavaScript - node.js, using several libraries, most notably the *three.js* and *dat.gui* libraries. In the editor, the user can import the video and can then either simply play it, or begin adding content. Support for creating multiple projects exists, as well as exporting them. When it comes to hotspots, this is where the editor truly shines. In a video, several types of hotspots can be added, such as Gateways, which transport a user to another area (and back) and Information Hotspots, which display information about a particular area, monument, or the like. Besides text, a hotspot can also include images and sound files. Furthermore, a user has the ability to modify a plethora of properties of each hotspot, such as the name, type, visual model, complete 360-degree positioning and rules for activation, including how long it will take to activate.

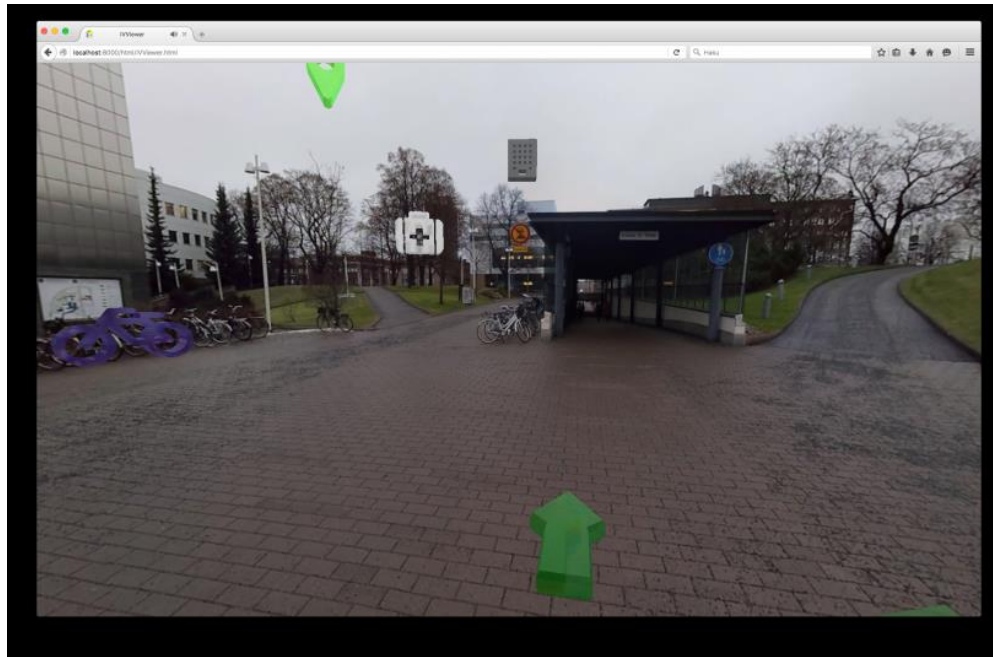
The viewer also works on Android mobile devices and, when coupled with VR devices such as the Oculus Rift, the end user is truly immersed in a fabulous experience.



Creating a scene with the IV Editor, in all its glory!



Creating an Information Hotspot



An example of what the end-user sees. Shown here are info hotspots for bicycle parking, the YTHS/FSHS building and a Gateway hotspot leading to Linna

The project personnel - group and others

Virtual University (TaY/SIS)

Pekka Mäkiäho
Supervisor



Ville Mäkela
Client



Ammaar Mufti
Manager



Ghassan Abarbou
Manager



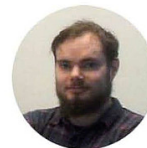
Jesse Jaara
Developer



Jussi Karhu
Developer



Santeri
Taskinen
Developer



Sami
Voutilainen
Developer

Others not in pictures: Santeri Saarinen (Client), Markku Turunen (Client) and Timo Poranen (Supervisor)

Artikkelilaji: [Stipendiartikkelit](#)



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