



Insert live 3D in Vricon 3D-models

About Vricon

Vricon serves the global professional geospatial market with world-leading 3D geodata, 3D visualization solutions, and 3D image processing solutions. We're on a mission to build the Globe in 3D—a revolution in GEOINT tradecraft—that offers decision makers and analysts the entire world in highly accurate, immersive 3D. Vricon's customers are varied and come from the telecommunications, emergency response, defense, and intelligence communities.

We are searching for the best and brightest to join a culture that is open and flexible, inclusive and positive. We offer opportunities for growth and the ability to work with talented people who make a real difference for our clients. The majority of our research and development work is done in our Linköping office in Sweden, which employs about 40 engineers who work on cutting-edge technology to produce unparalleled, global, precise 3D geospatial data and software.

The Thesis

Digital surface models (DSM) are the main product of Vricon. The DSM is a static model. The thesis shall interchange a (moving) minor part of the static model to a live reconstructed 3D-model and display that. The origin of the live model can be time synchronized video streams or images from 2,3 or many drones from different camera positions but covering the same area. In the future the sensors can be a number of satellites. An easier way to produce synchronized video streams can be to just record 2 or more videos of the same area and synchronize them afterwards and accept a time difference of max 0.5 image time. And have slow movement in the scene.

The goal with the thesis is to do a demo in real time with 2 or more UAV-sensors in one PC. To achieve the real time it will probably be to use some shortcuts e.g. few(2?) sensors, decrease framerate (from 50 to 1 Hz?), decrease used part of image, scale down the resolution of the image,

The thesis shall also modify a Viewer-tool for visualize moving 3D-objects in time.

Qualifications

Master of Science student with knowledge in image processing, sensors, reconstruction and live video streams . 1-2 persons.

Contact

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