

3D change detection by new 3D camera system Application note 2013-02-09 Page 1 of 2





Laseroptronix and partners has developed a new camera software and new generation of cameras that can see in real time 3D viewing. Unique is that we can use a single camera and get a real 3D view from this single camera. We use any standard camera that have a matrix and an image output. This includes all CCTV cameras and thermal cameras et with no limitations. Output is a cloud of points that can be used an any way needed. We can supply a 3D image that can have colored pixels but also CAD files

and just cloud of points with pixel coordinates.

Top here is a colored 3D image of a rail road crossing. Here we see most of details up to about 100 meter in distance and resolution in crossing area is a few cm and no more

In this test we used the camera in a I-Phone 5 to get the 3D image of the area. We could in principle use any camera as CCTV or a thermal camera to get same output if pixel number is comparable. Here we used 2 Megapixels in resolution as a HDTV camera do these days.

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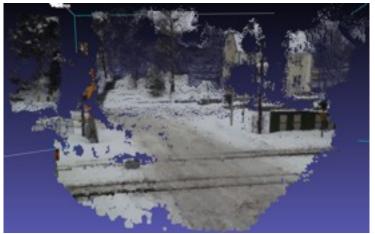


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View of empty area and no new obstacles or objects in the area between the gates. Camera is about 10 meter out of crossing and can see all over area and a bit

more. This is stored as a 3D master image for reference.



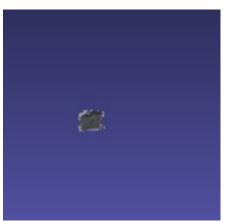


Here we add a 20 liter plastic box that can be seen in the left image at

left side of area. When booth images are compared and subtracted in 3D we get this image that shows the difference only. What is here is the box and nothing more.

Compared to a 2 D image this is far more robust in detection and we have real 3D and contrast and illumination matters get far better than a 2D camera.

This works on all objects and range can be very short up to see persons at over 1000 meter in range and have a correct 3D alarm and also a coordinate and distance.



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