

3D Scanning

Microsoft Kinect



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Motion Sensor for Xbox + PC
Kinect = Kinetic + Connect

Infrared projector

RGB camera

Infrared sensor

Projects a pattern of infra-red dots onto scan subject which are triangulated by the receiver to work out the depth

RGB camera records the colour for mapping onto the 3D model



Knowing how it works is useful

for predicting when it will not work that well or at all...

e.g.

- for small objects
- outside
- with multiple Kinects

...or when it will work well or unexpectedly

e.g.

- for large objects, people, room interiors
- in the dark

Click the video on the next page to see more on how it works...





Microsoft released the Kinect SDK for third party developers in 2011

Skanect is one such developer that repurposed the Kinect for 3D scanning

The software is simple to use, downloads and tutorials are on the Skanect website:
<http://skanect.occipital.com/>

Free version vs. pro version

identical except in free version meshes cannot be saved and model exports are limited to 5000 faces.

The free version does however save the images from a scan which can be reconstructed, saved and exported at full res by using the Pro version installed on EMS Mac 8