

The Art of Stereoscopic 3D **Robert Klaschka**

Why is it worth taking another look at stereoscopic rendering?



- Microstation has been able to render out stereo pairs with a fairly low time overhead for sometime
- Games and home market have drastically reduced price of hardware



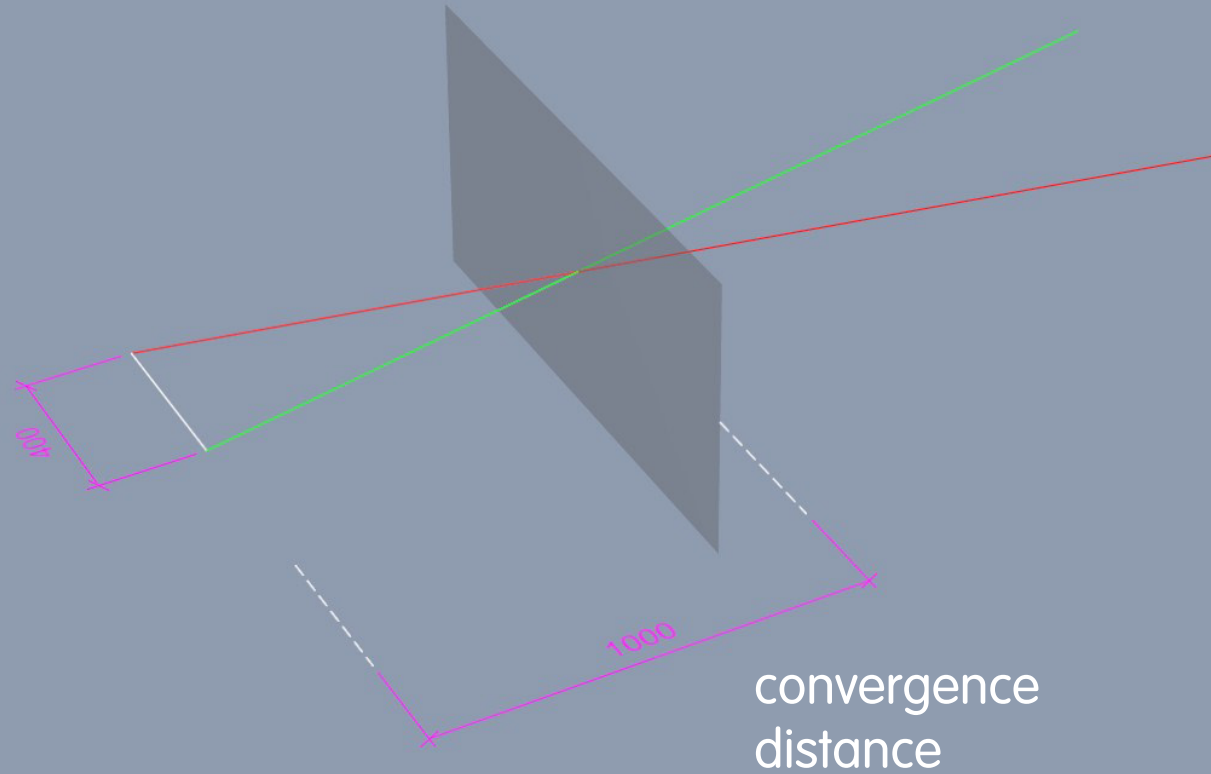
Simple geometry of a stereoscopic image requires an understanding of just two variables and how they affect the scene

- convergence distance
- inter-ocular separation

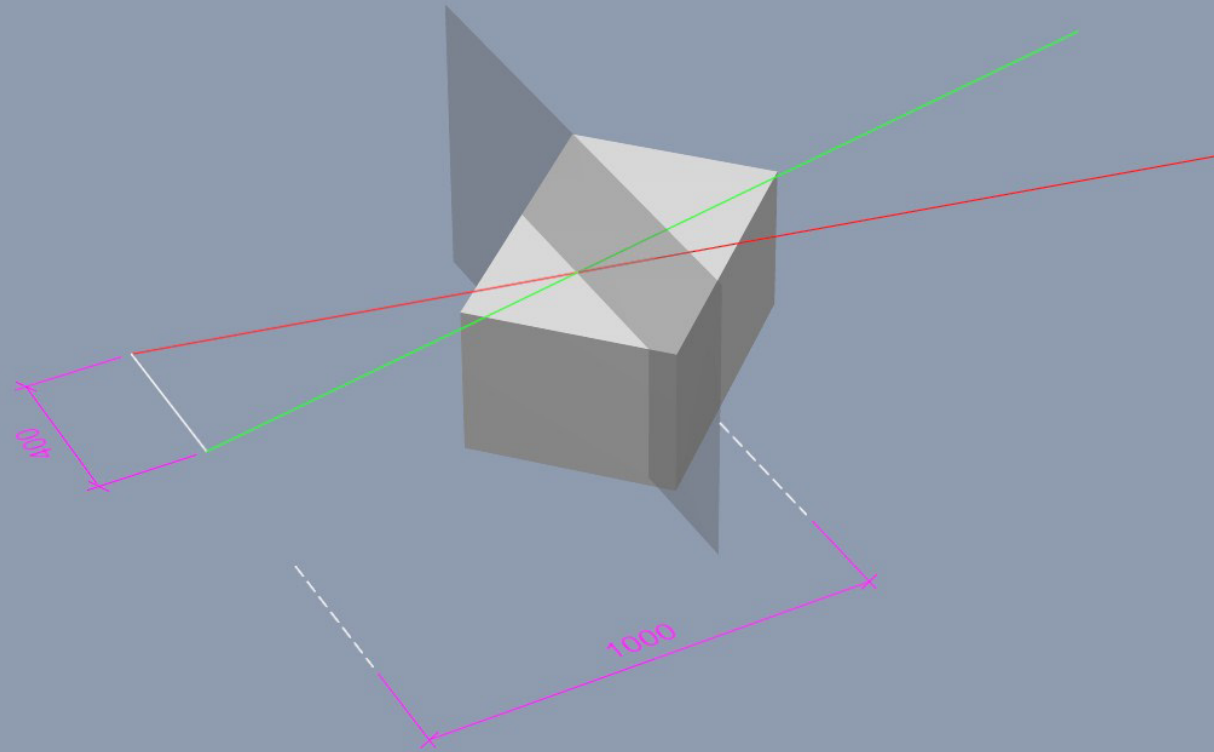


Plane of
projection

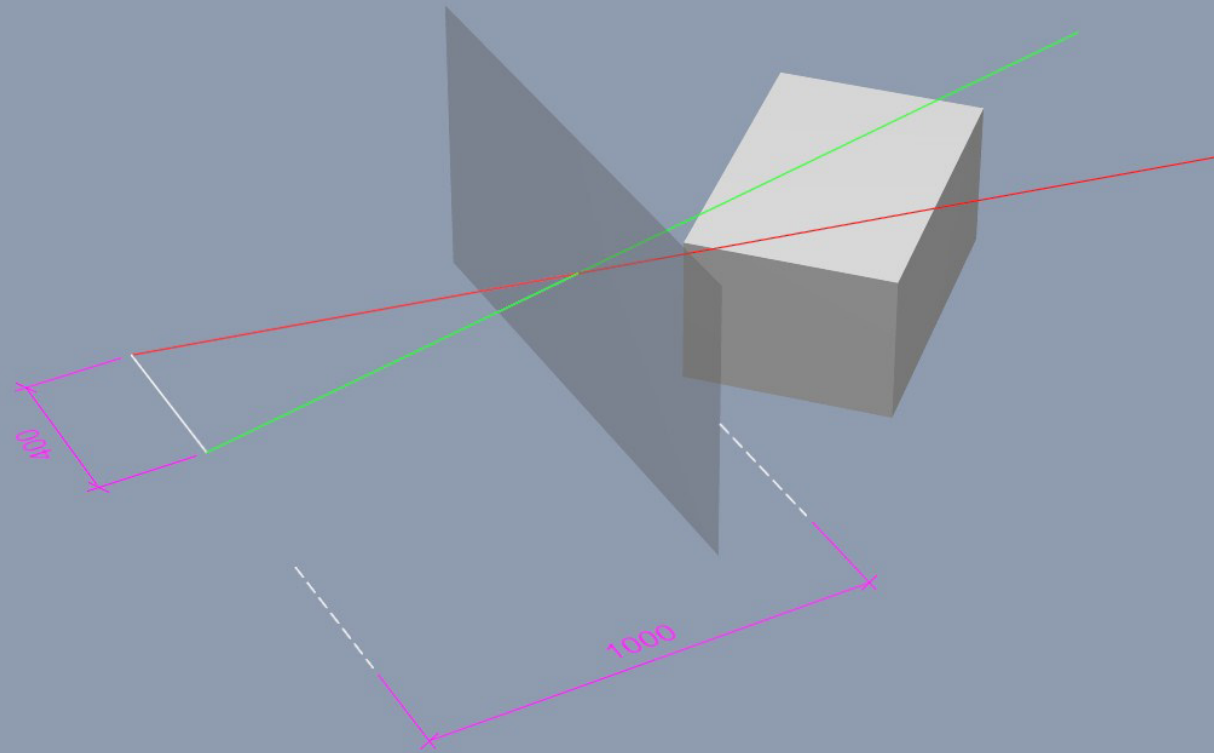
interocular
separation



The plane of projection is the surface of whatever you are using to project on to

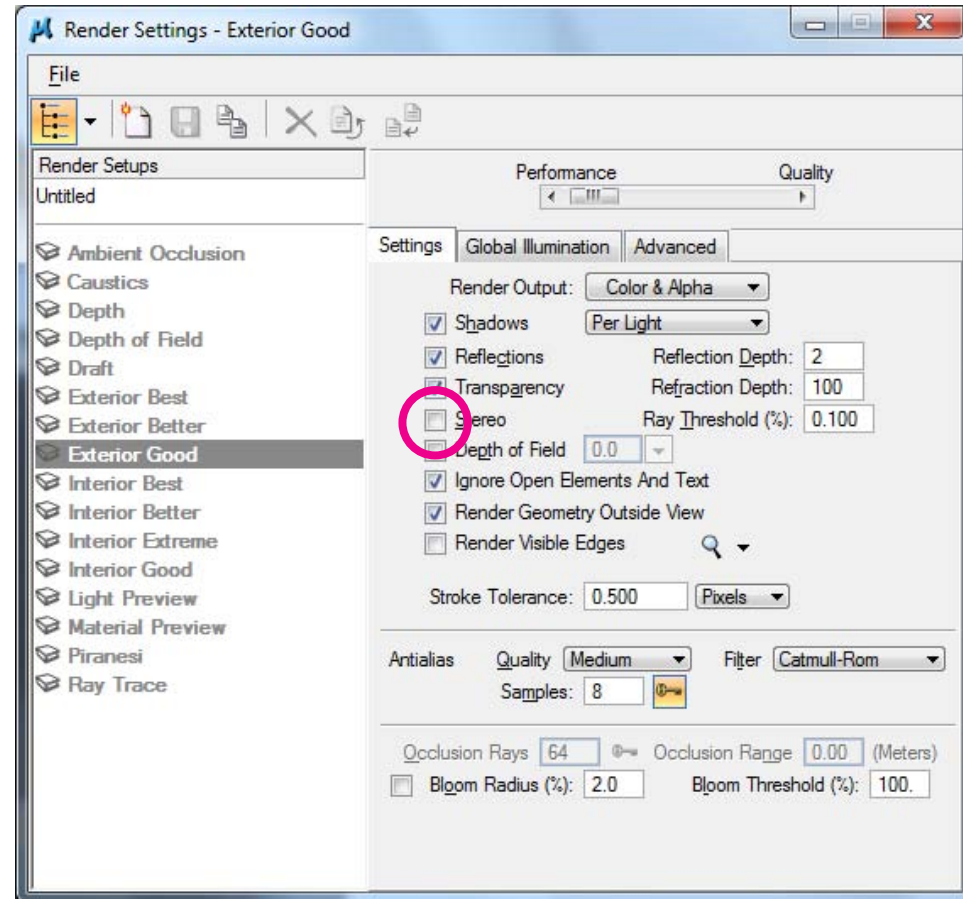


Objects that are further away will appear behind the screen.
You'll appear to look through a frame into the scene (the picture frame effect)



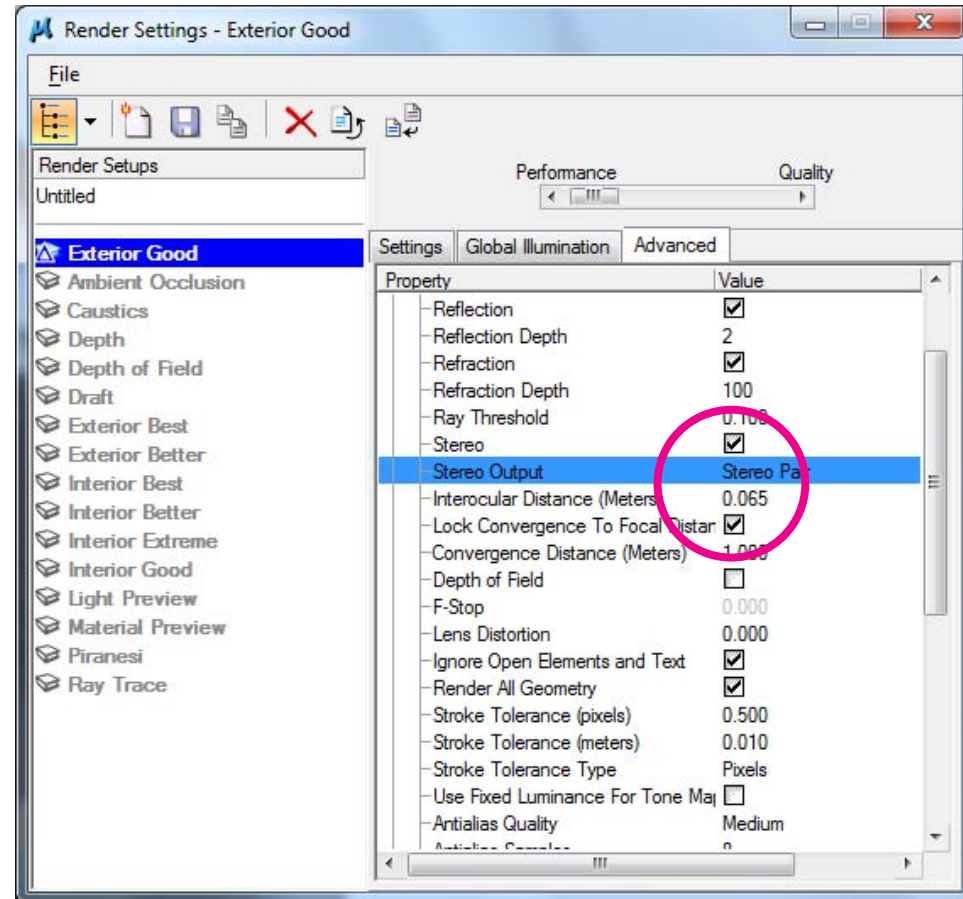
Controls in Microstation

- numerical inputs
- lock convergence distance to focal distance



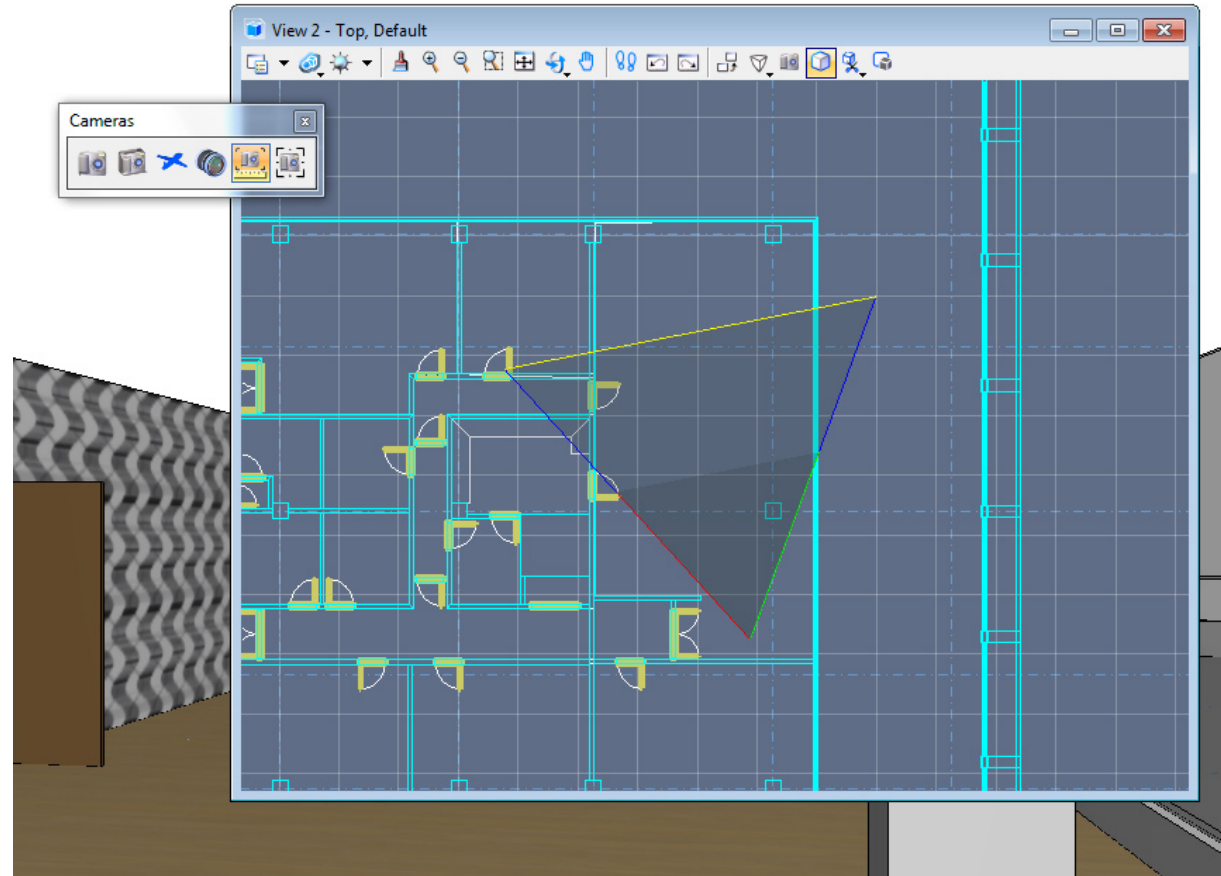
Controls in Microstation

- numerical inputs



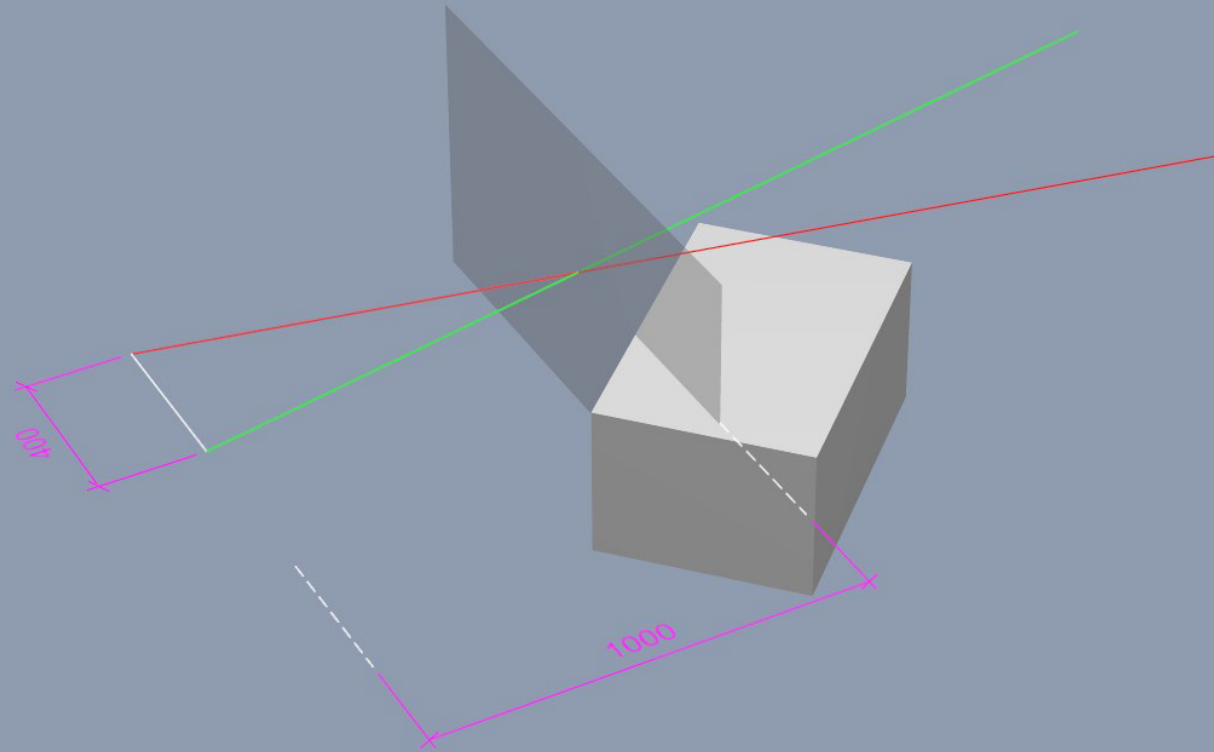
Controls in Microstation

- lock convergence distance to focal distance

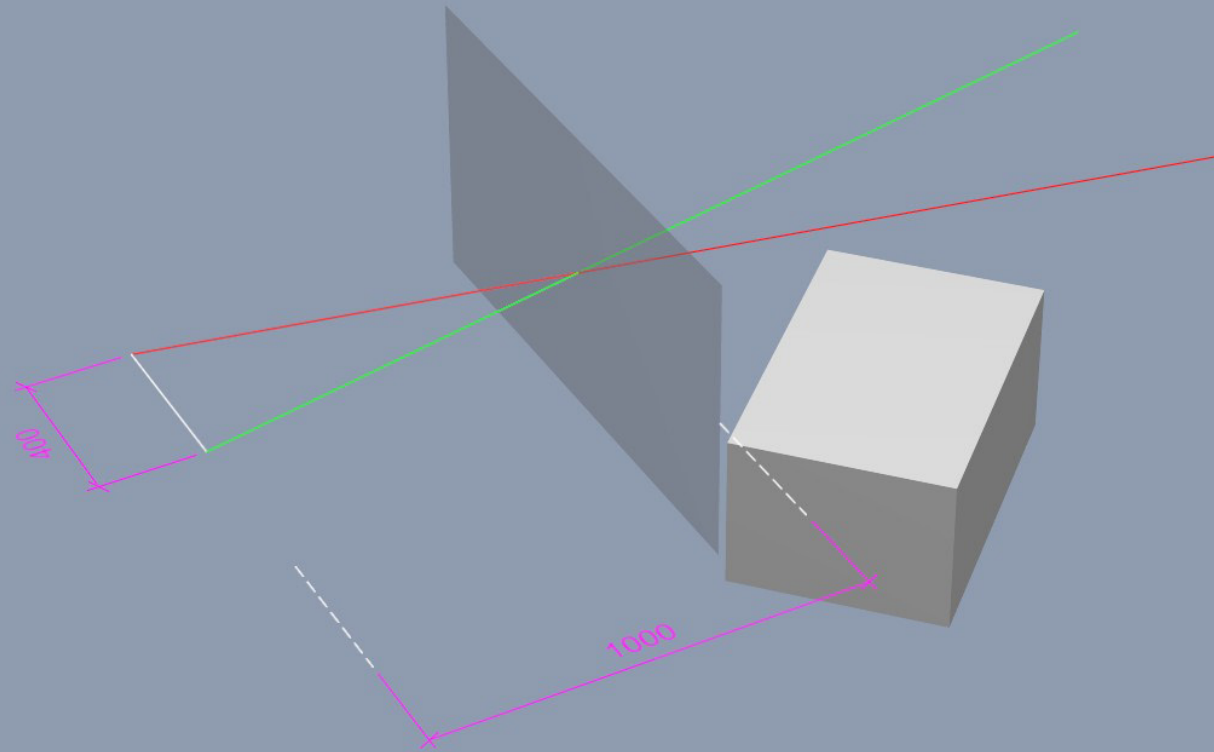


Studio Rule:

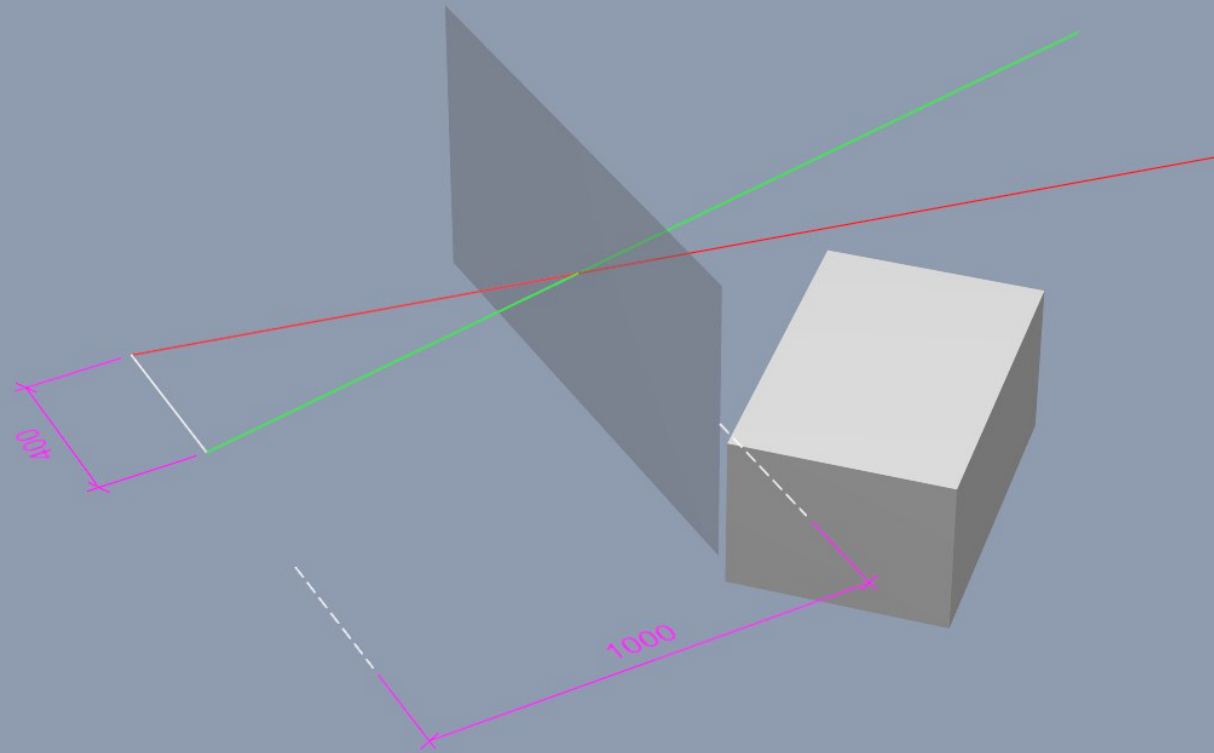
Objects in your scene shouldn't cross the boundary of the frame itself in space because they will appear to fall out of the front or sides of the screen



Either move the camera back or bring the
inter-section distance closer



Studio Rule:
Interocular distance should never exceed
 $\frac{1}{30}$ th of the convergence distance



Choosing a view

- one point perspectives which show lots of face straight on gives a pop-up book feel
- a rotated view looking into a corner or revealing two sides on an object feels much more solid



Examples

- 19 Tabard Street
- East London Mosque - Phase 2
- Kings Head Reception/Breakout
- Muntada Mosque and School

