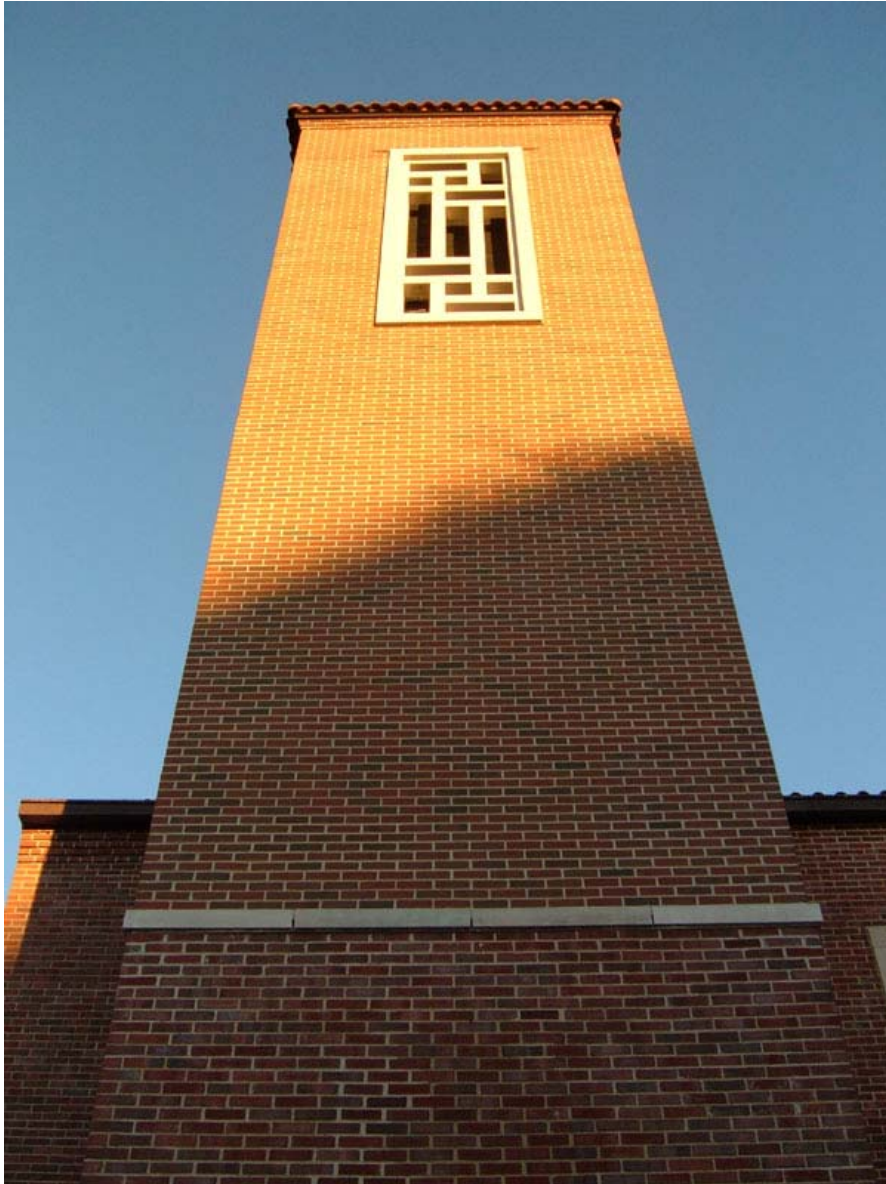


Perspective effects may cause undesirable visual rendering of planar object



Recall from perspective, that lines not parallel to the image plane will converge at a vanishing point – Architectural photographers encounter this frequently

A solution to the problem of unwanted convergence

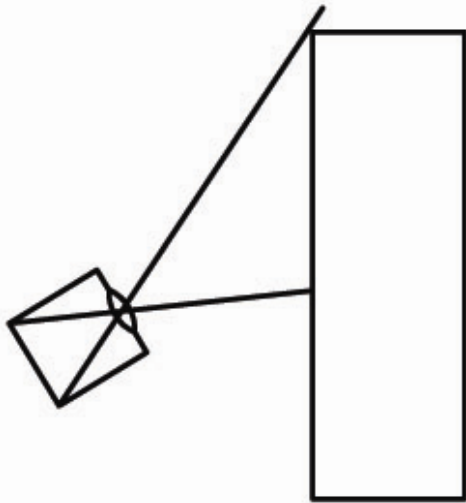
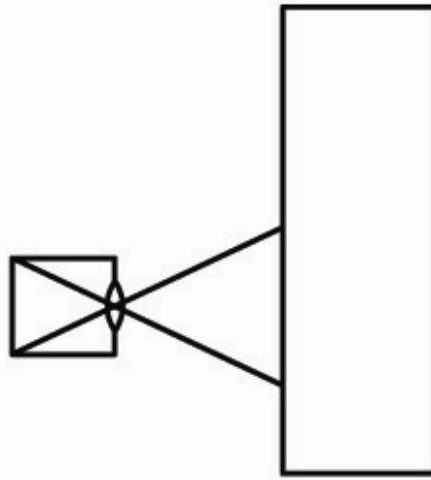
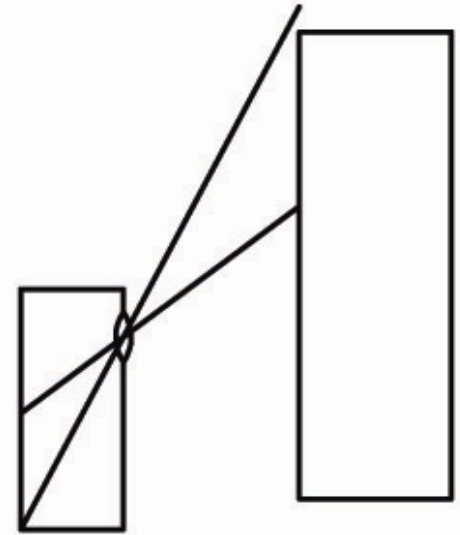


Image plane not parallel to the object plane causes the convergence of lines which is characteristic of perspective projection



Make the image plane parallel to the object plane and you solve the problem of keeping the lines parallel but you do not get coverage of the object that you want



A solution: shift the lens up parallel to the image plane, i.e. detector and lens are no longer “lined up”, but you now get the coverage you want plus the object lines remain parallel



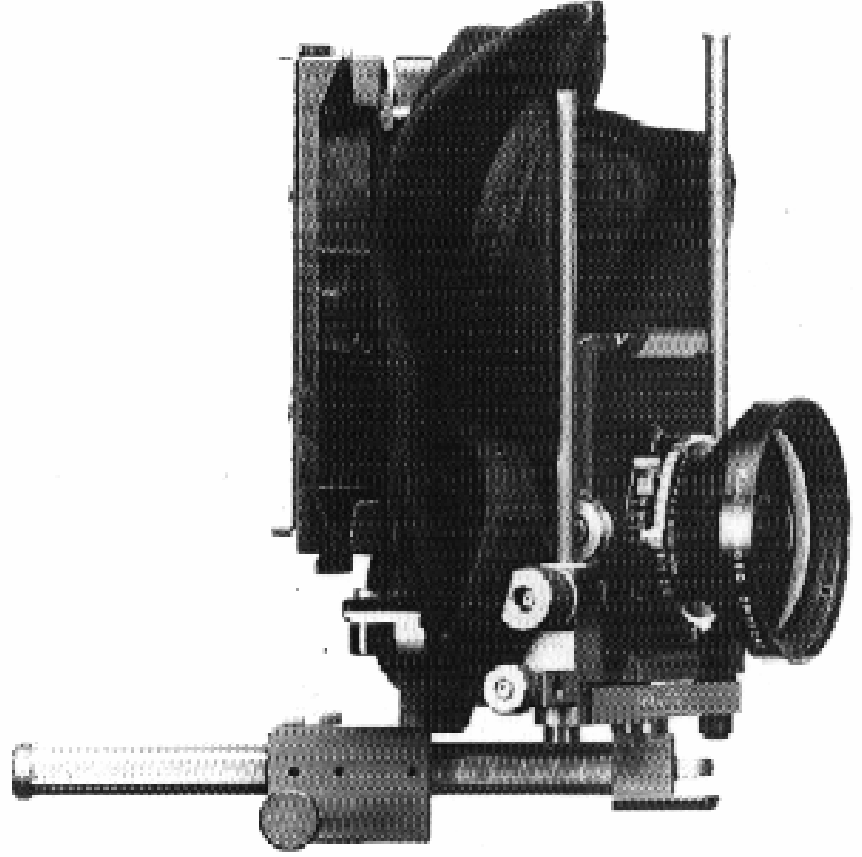
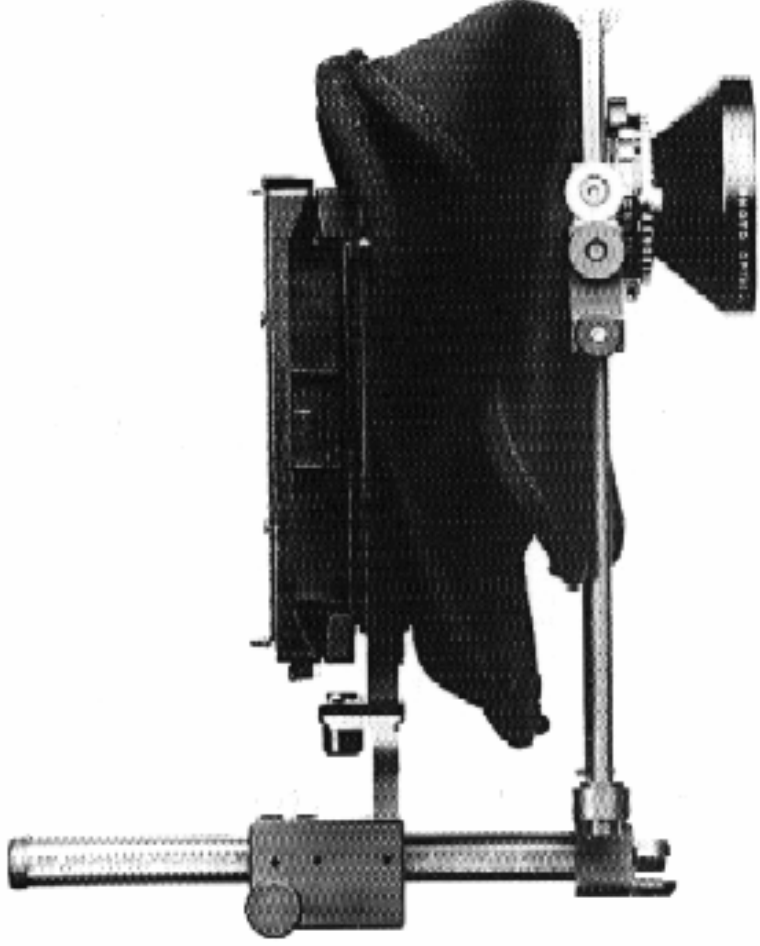
These image pairs were made without and with such a lens displacement







Some cameras that allow shifting of the lens parallel to the image plane



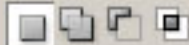
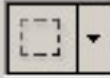
Sliding lens board is expensive solution, it is really just a rectification problem – can solve by 8 parameter transformation and resampling

- Can do it with control points (4 minimum) and solution of the 8 parameter model
- Can do it “graphically” using tools such as Photoshop

- Select All
- Edit
 - Transform
 - Perspective (then drag corners)

Adobe Photoshop

File Edit Image Layer Select Filter View Window Help



Feather: 0 px

Anti-aliased

Style: Normal

Width:

Height:

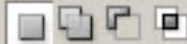
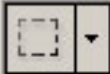


DSCF0941.JPG @ 66.7% (RGB)



Adobe Photoshop

File Edit Image Layer Select Filter View Window Help



Feather: 0 px

Anti-aliased

Style: Normal

Width:

Height:



DSCF0941.JPG @ 66.7% (RGB)





Copyrighted Photo

