Coplanarity Constraint

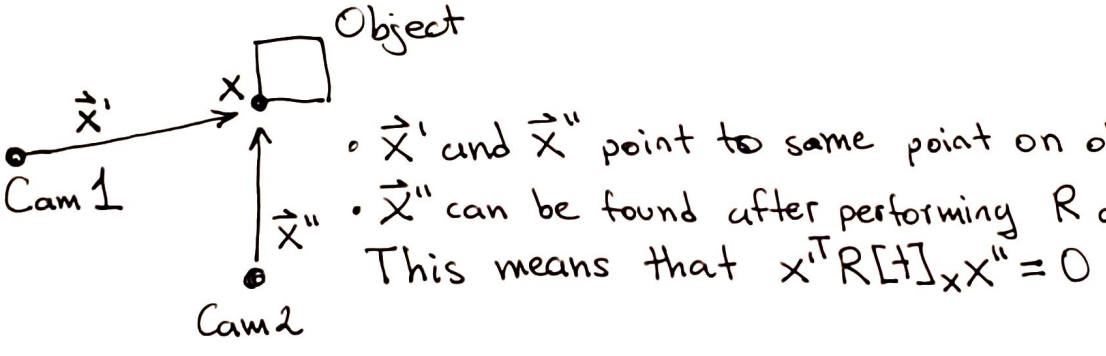
If $F = K'^{-T}[t]_x R K''^{-1}$ then, $x'^T F x'' = 0$. (1)

K' and K'' are intrisic matrices.
R is the rotation with respect to camera 1.
x' and x'' are image coordinates.
$'$ means camera 1.
$''$ means camera 2.

We also know $E = R[t]_x$, then $x'^T E x'' = 0$. (2)

(1) and (2) are coplanarity constraints.

Coplanarity constraint means that 2 same points in reality x' and x'' mean that equations (1) and (2) must hold true. Remember E is rotation and translation.



- $\vec{x}'$ and $\vec{x}''$ point to same point on object X.
- $\vec{x}''$ can be found after performing R and T on $\vec{x}'$. This means that $x'^T R[t]_x x'' = 0$