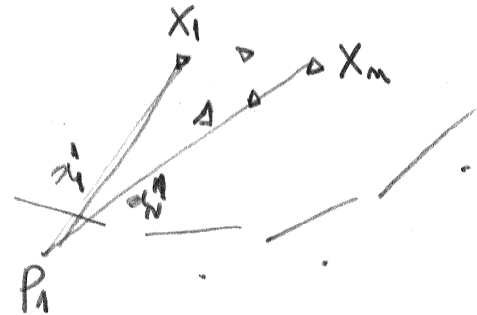
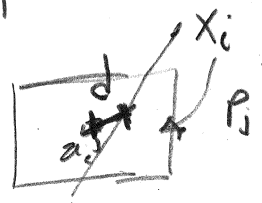


CLASE 9: Bundle Adjustment and Active STEREO.-

given m views of n points,
 $\Theta \stackrel{\text{def}}{=} \{X_1 \dots X_m, P_1 \dots, P_m\}$
 state vector, we seek for:



$\hat{\Theta} = \underset{\Theta}{\text{argmin}} \sum_{ij} d(P_j X_i, a_i^j)^2$ where d is the geometric distance between the i^{th} key point on image j and their respective projection $P_j X_i$

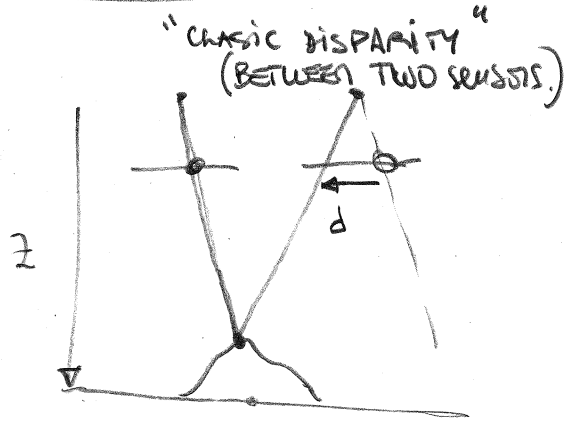


This estimation involves adjusting the bundle of rays between each camera centre and the set of 3D points.

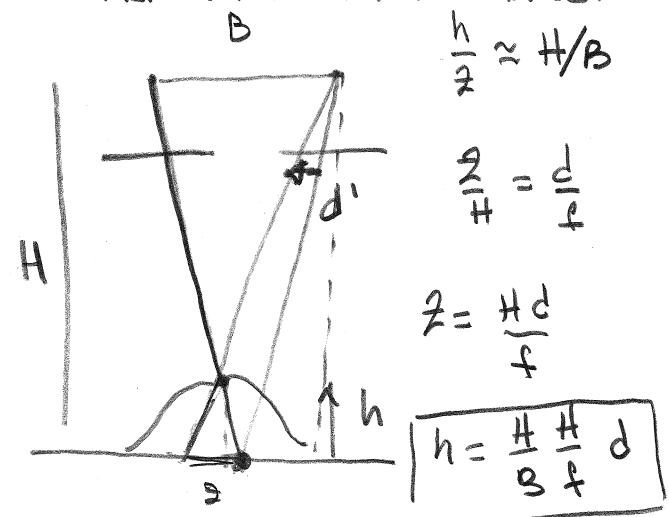
When n points for m views are fitted, we need to minimize on the domain $\Theta \in \mathbb{R}^{3m \times 2m}$, this entrance to consider intelligent optimization schemes for this problem.

Active STEREO:

* BETWEEN AN IMAGE PROJ ON A REF PLANE AND A DEF IMAGE.



$$d \propto \frac{1}{z}$$



$$d' \propto h$$

$$\frac{h}{z} \approx H/B$$

$$\frac{z}{H} = \frac{d}{f}$$

$$z = \frac{Hd}{f}$$

$$h = \frac{H}{B} \frac{H}{f} d$$