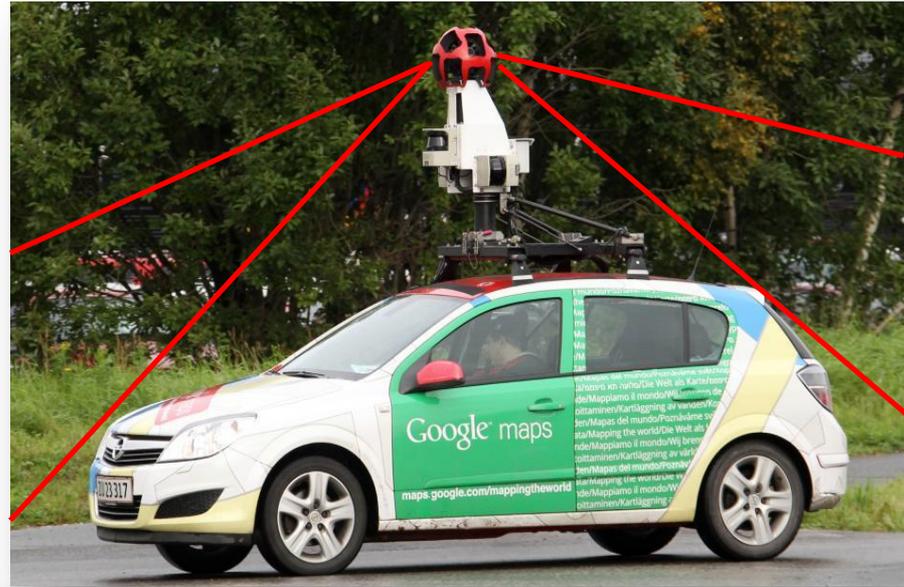


Photogrammétrie

Systeme d'acquisition mobile

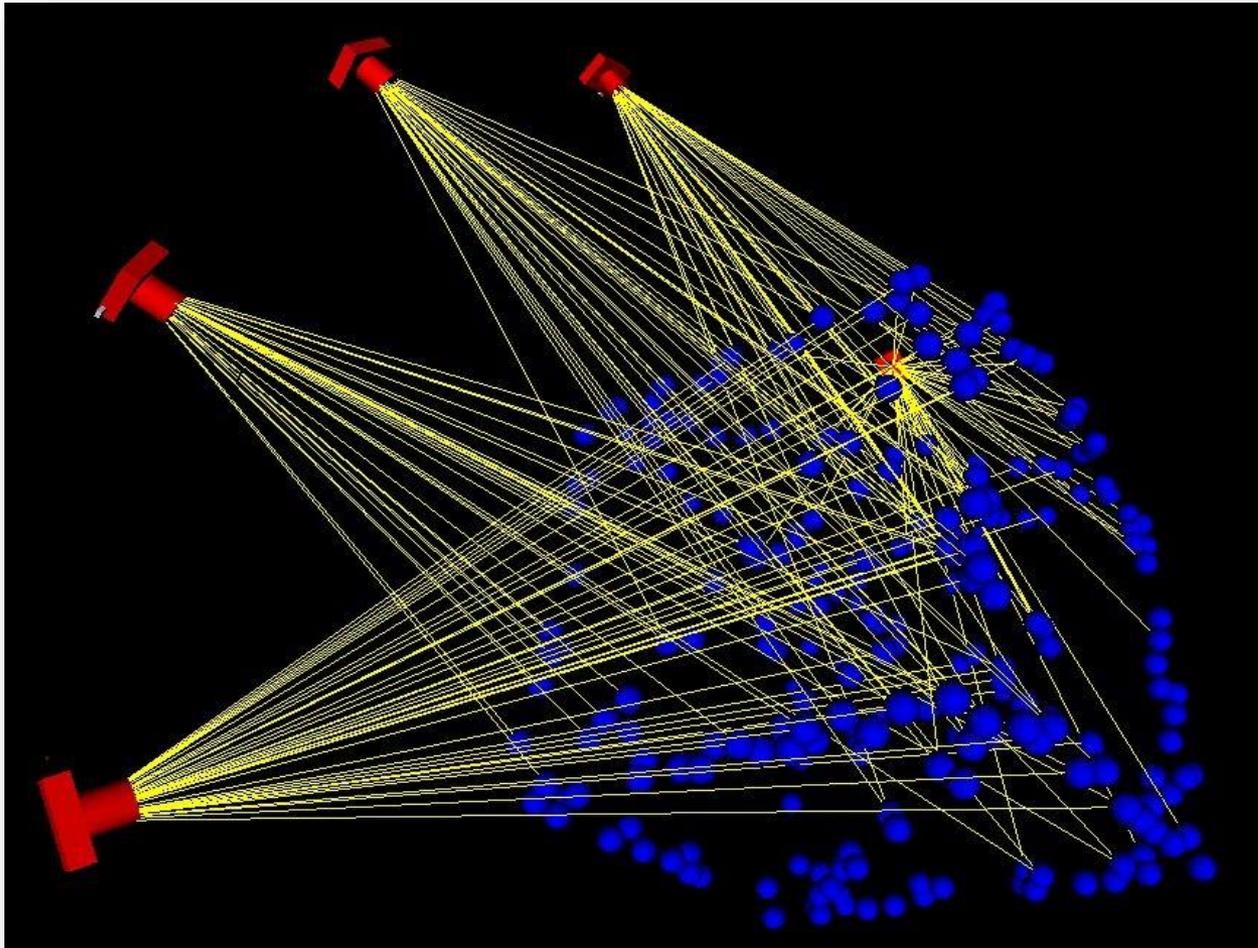
Optimisation de la mise en place

Prise de vue oblique



Point de fuite
Vue en
perspective

La mise en place repose sur la détection de points homologues



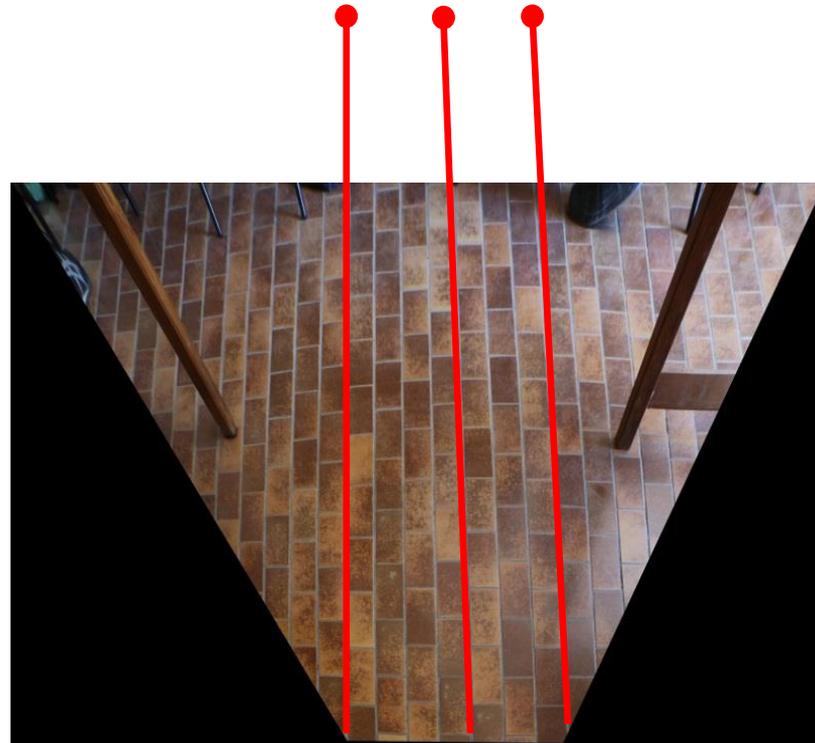
La perspective complique la recherche de points homologues

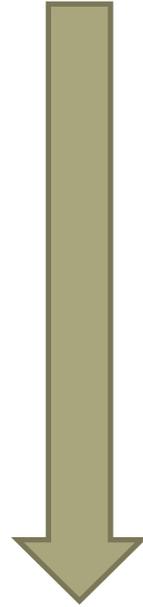
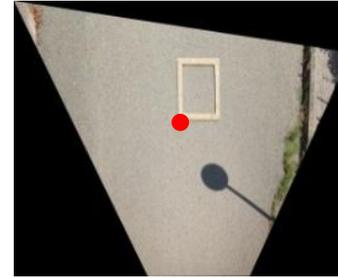
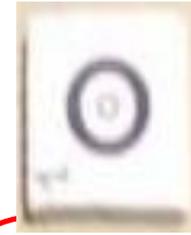
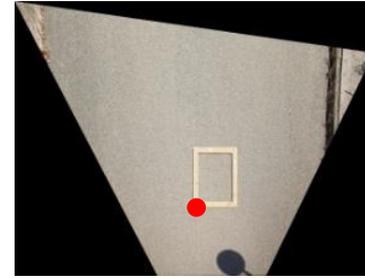
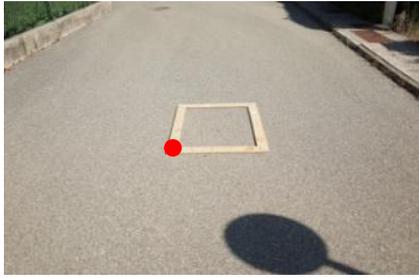


Solution envisagée

Notre solution :

- . Modifier les images par une homographie
- . Chercher les points homologues sur ces images
- . Rapatrier les points et mise en place





Dispositif de prise de vue



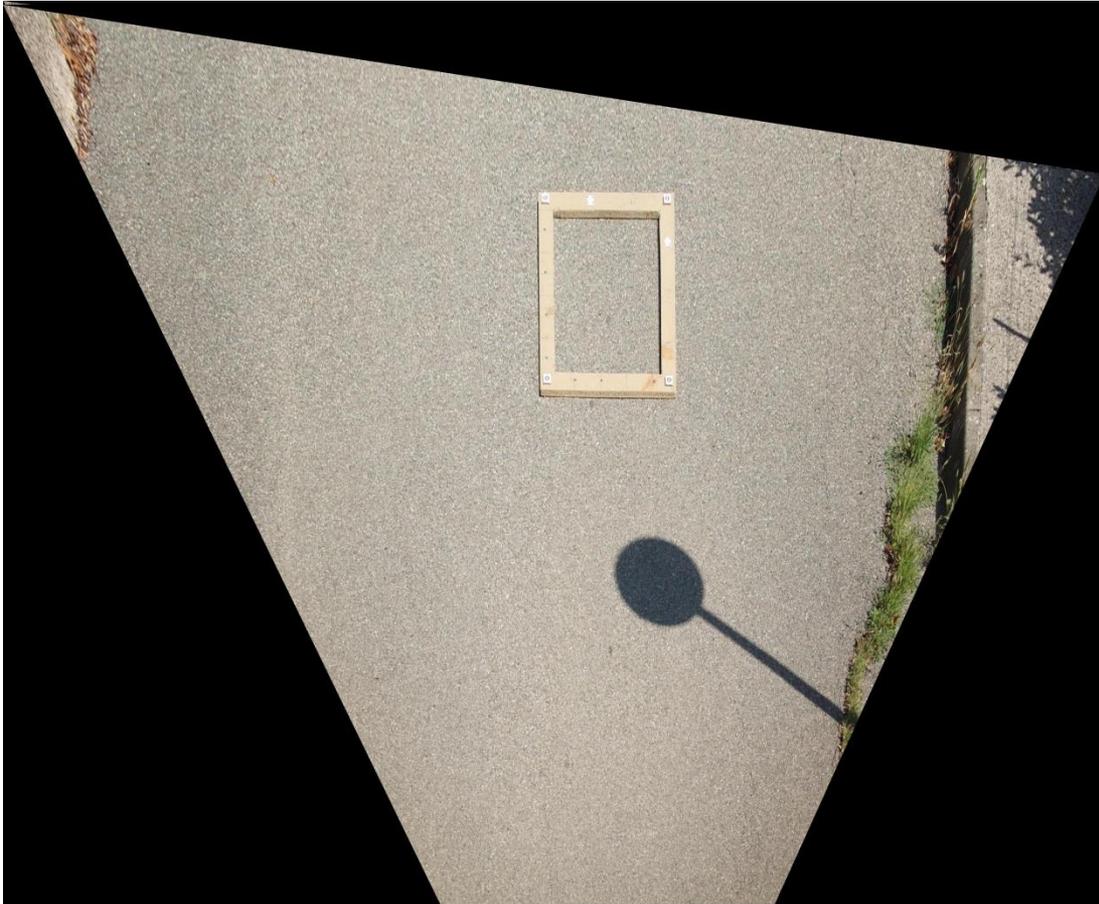
Dispositif d'acquisition



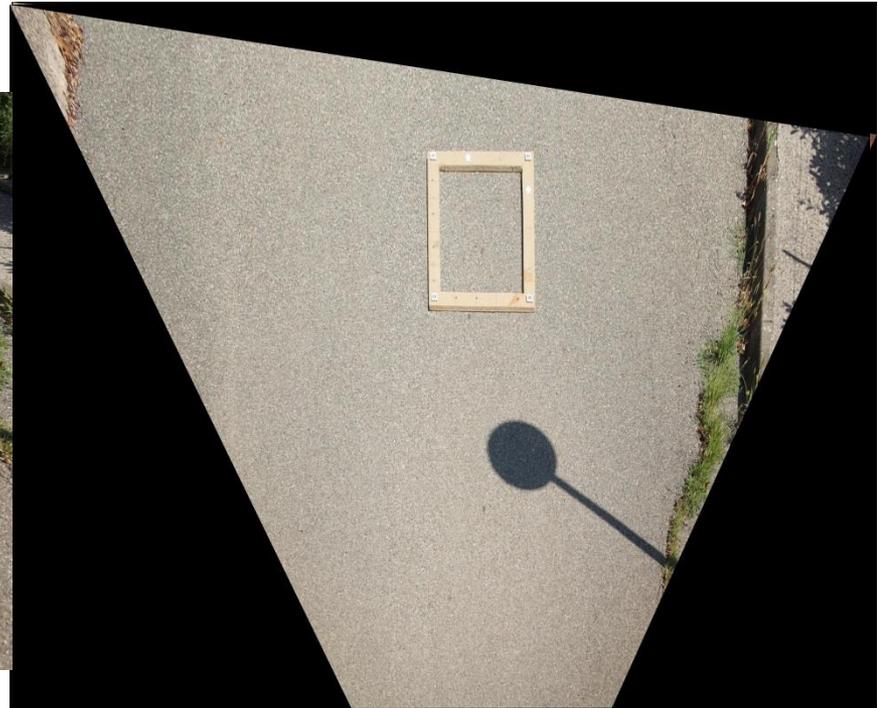
Dispositif d'acquisition



Dispositif d'acquisition



A changer



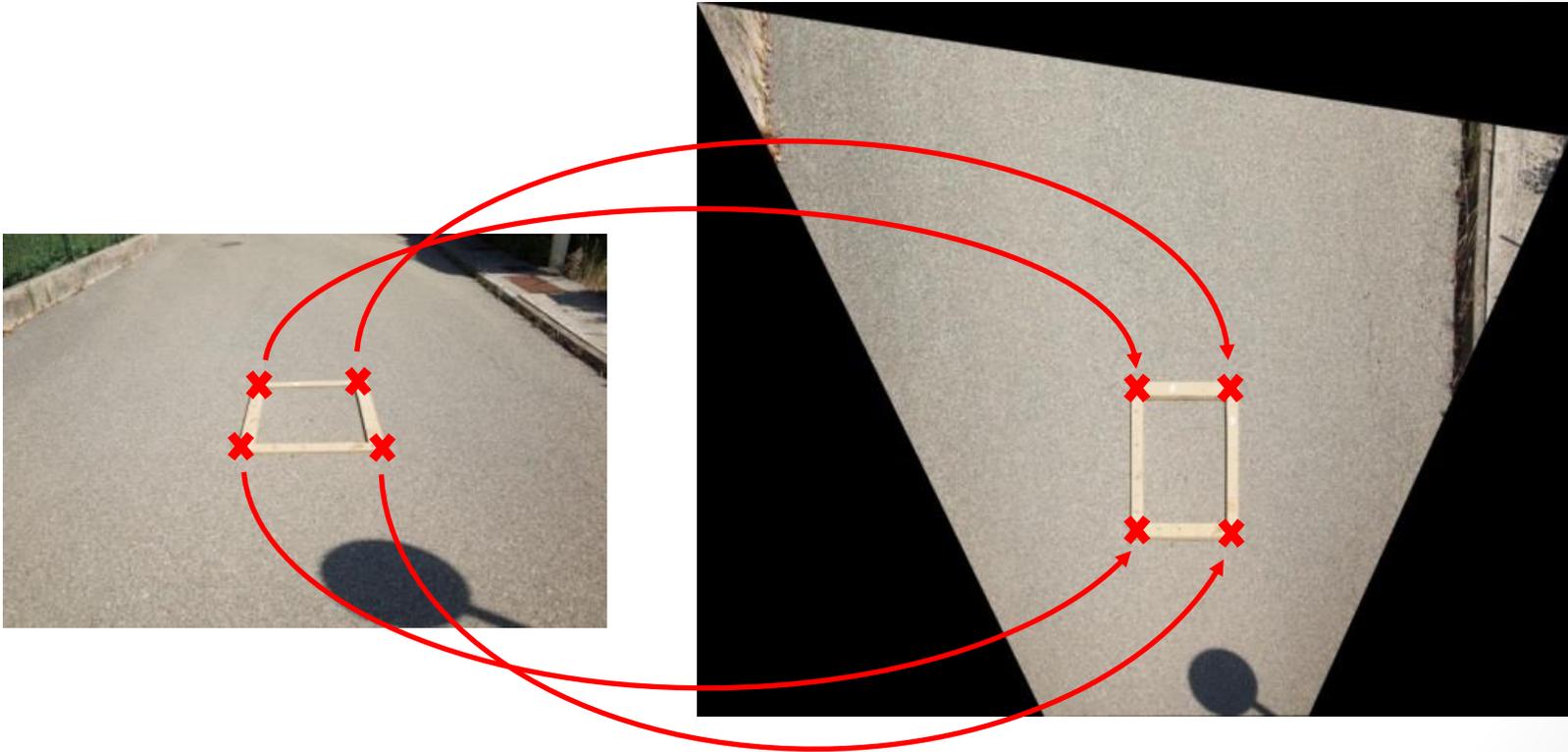
Méthode de calcul de l'homographie

Homographie

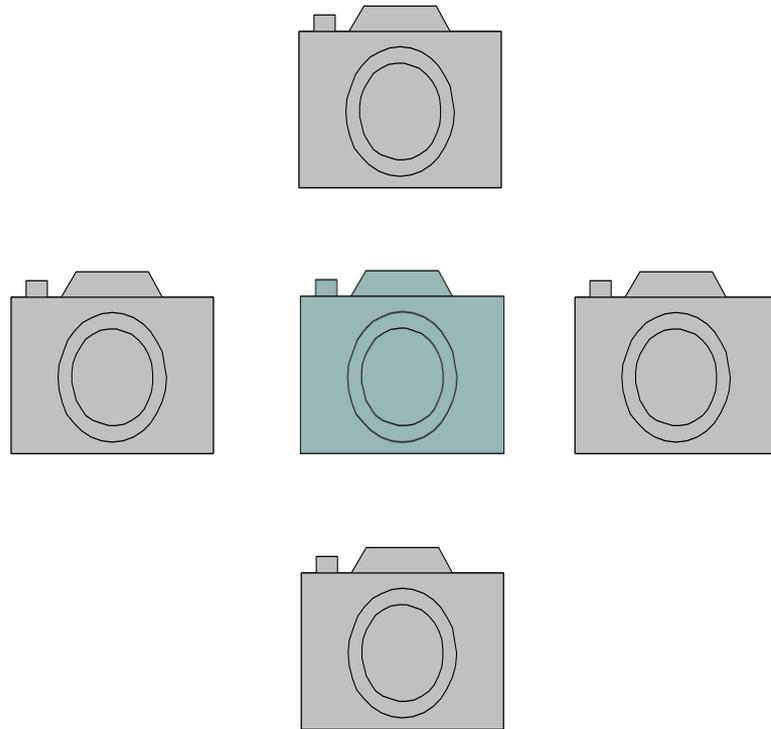
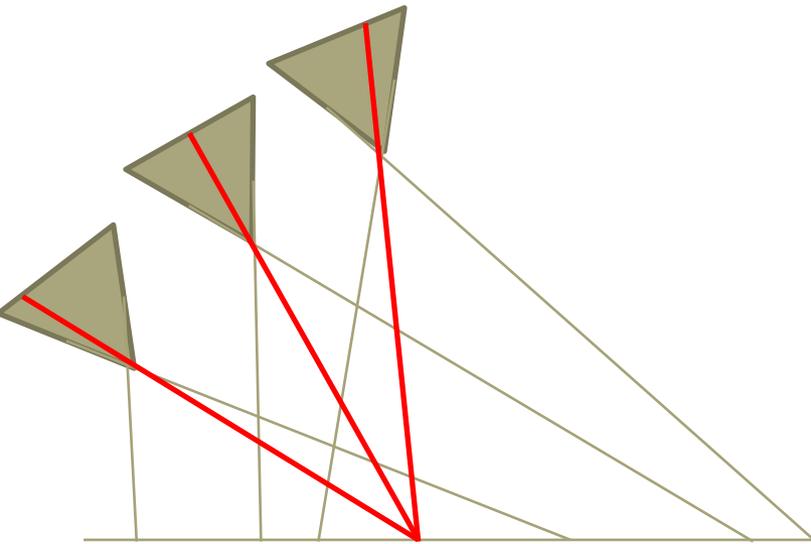
$$u = \frac{ax + by + c}{gx + hy + 1}$$

$$v = \frac{dx + ey + f}{gx + hy + 1}$$

Avec cadre

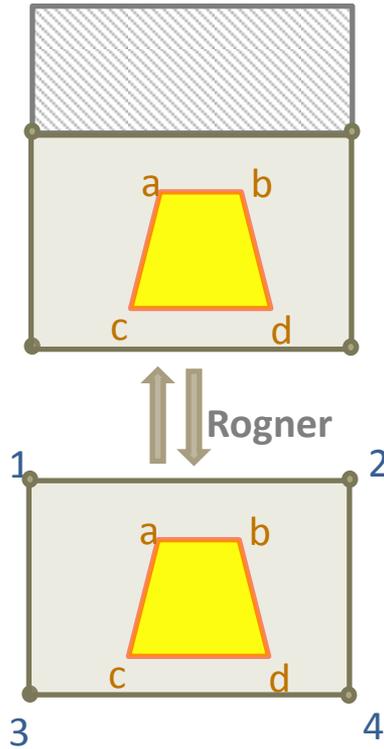


Sans cadre

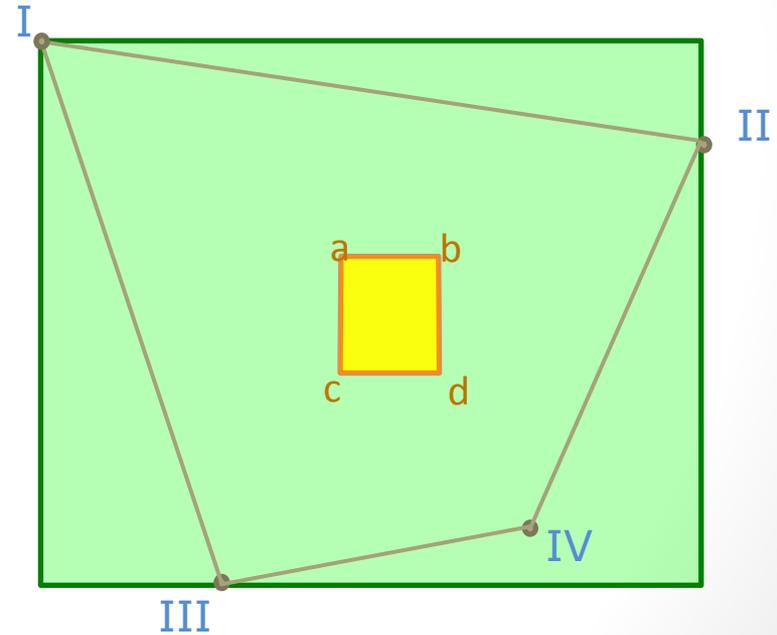


Protocole à appliquer aux images

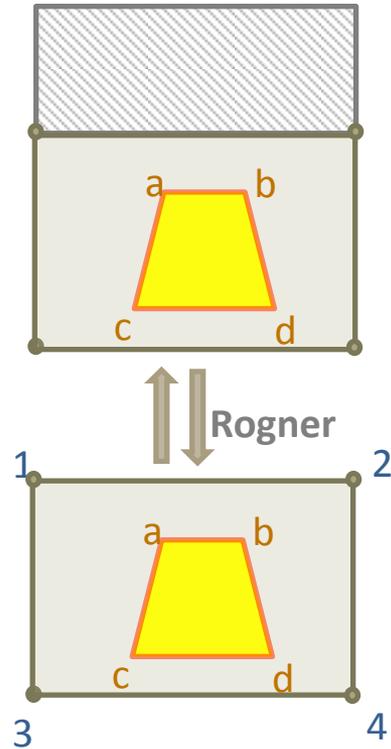
Le protocole mis en place



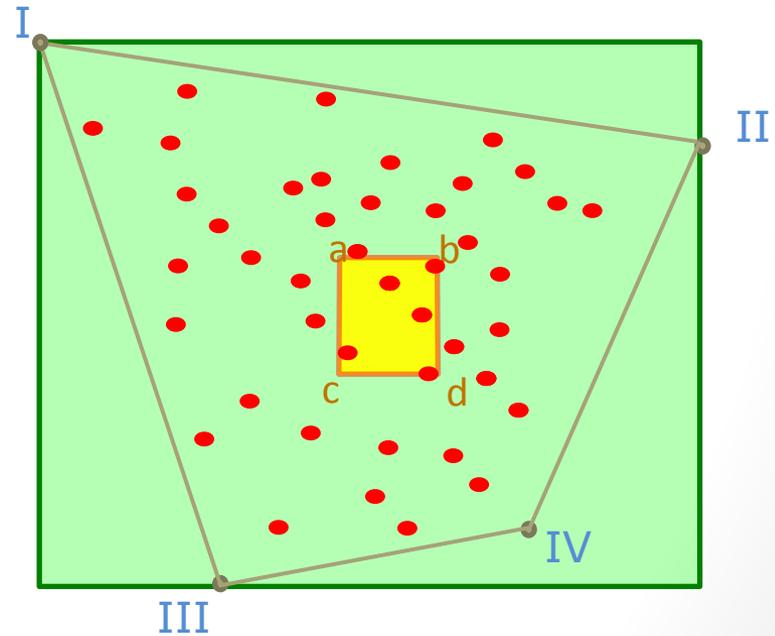
Homographie2D
+ fit



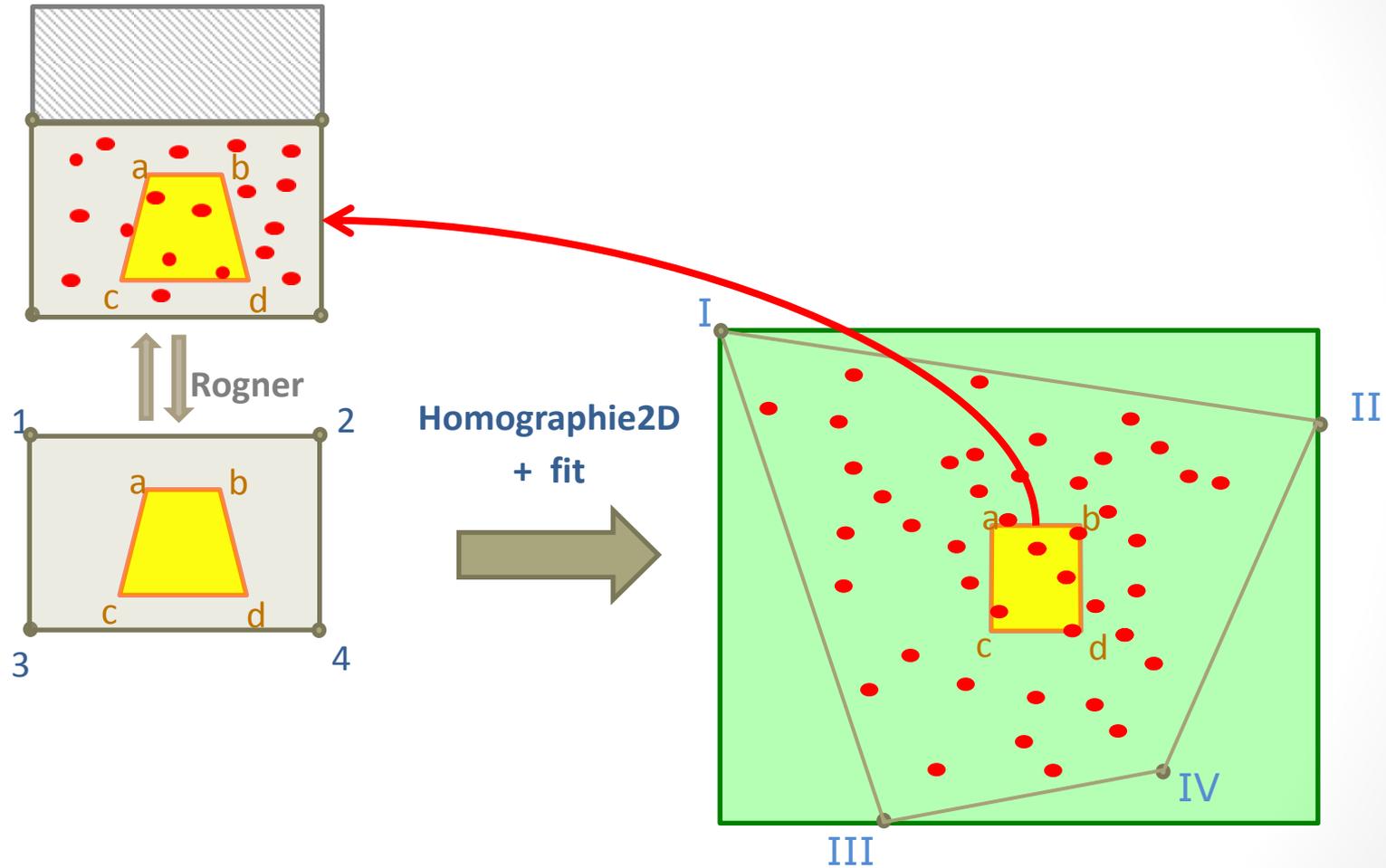
Le protocole mis en place



Homographie2D
+ fit



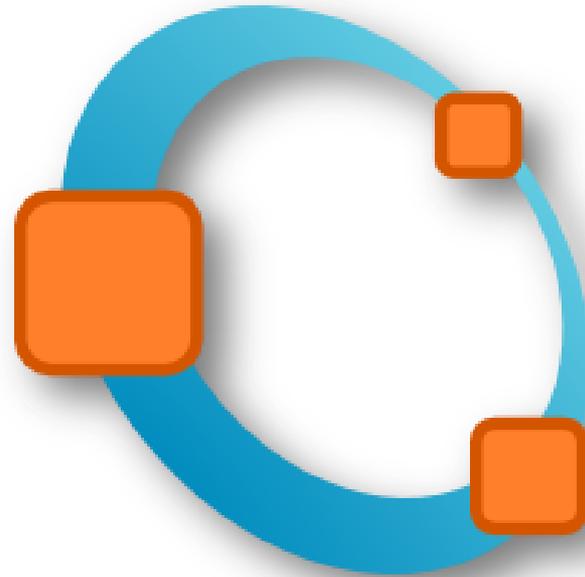
Le protocole mis en place





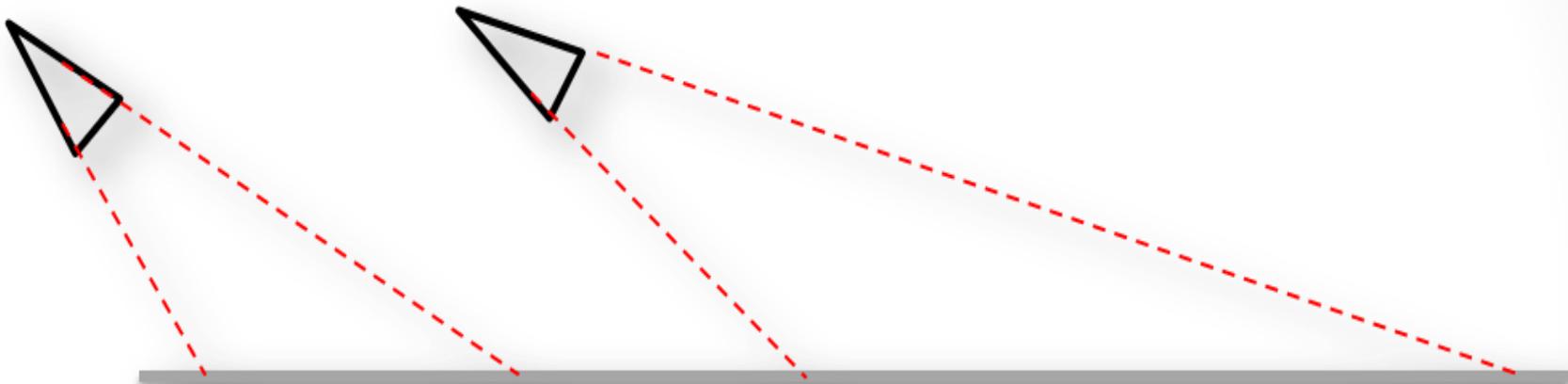
Script Octave développés

homographie.m
invHomol.m
saveM.m
calcTrans.m
transla.m
rogne.m
transTxt.m
rogneAuto.m
homoAuto.m
transHomol.m



Mise en œuvre et résultats

Variation d'angle



Sans Protocole	Avec Protocole
1,4 px	0,5 px

Angle peu rasant

Sans Protocole	Avec Protocole
X	0,57 px

Angle rasant

Variation du nombre de points de liaisons

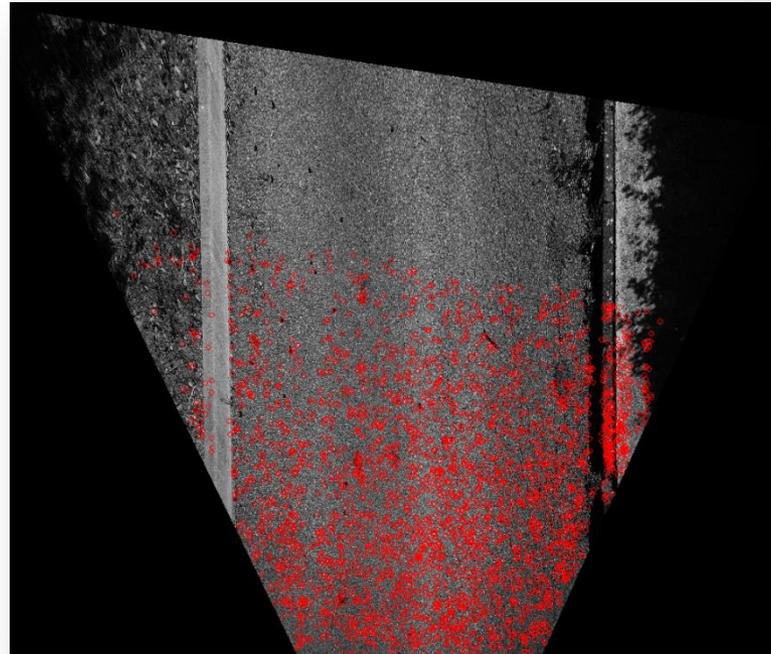
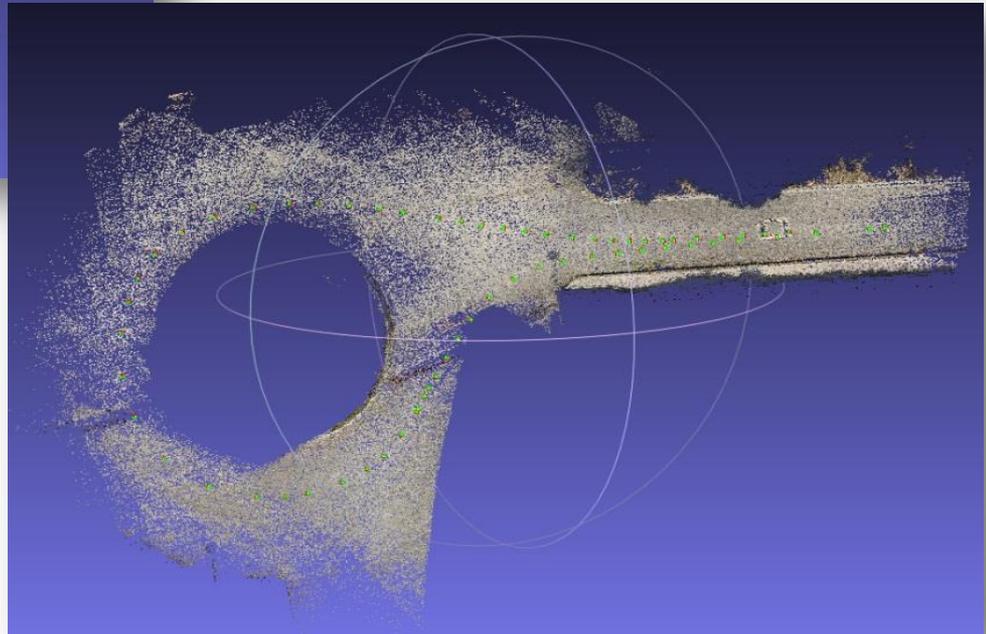
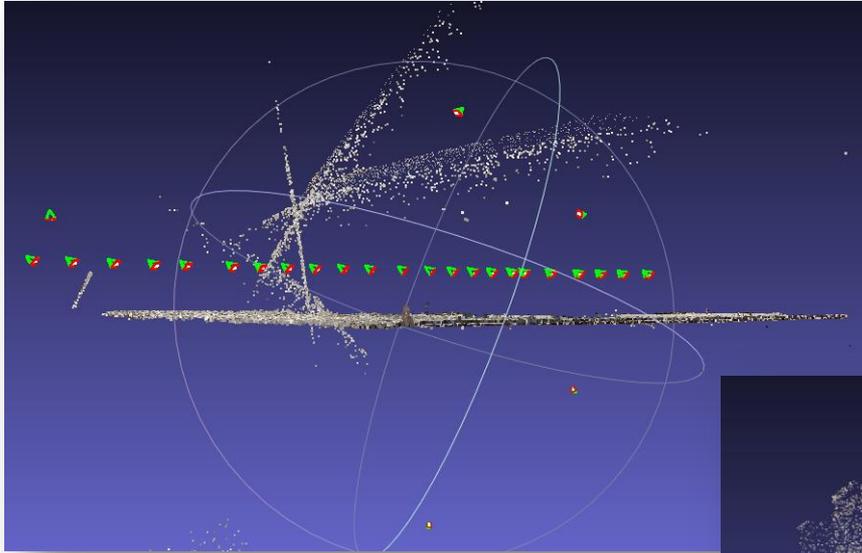
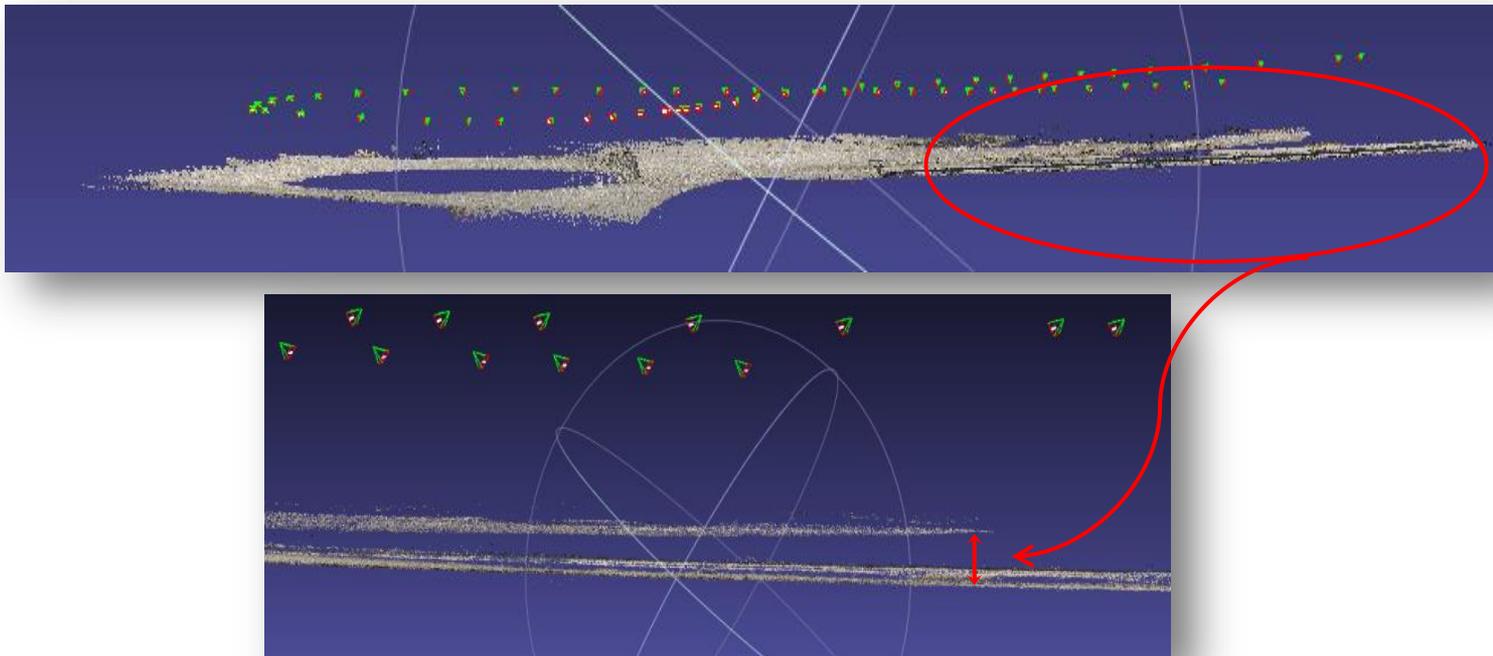


Image R0024950			
	Sans Protocole	Avec Protocole	Rapport
Image R0024947	6	18	3,0
Image R0024948	86	287	3,3
Image R0024949	1093	3743	3,4
Image R0024951	692	2411	3,5
Image R0024952	203	499	2,5
Image R0024953	70	72	1,0
Image R0024954	68	77	1,1

Rond point



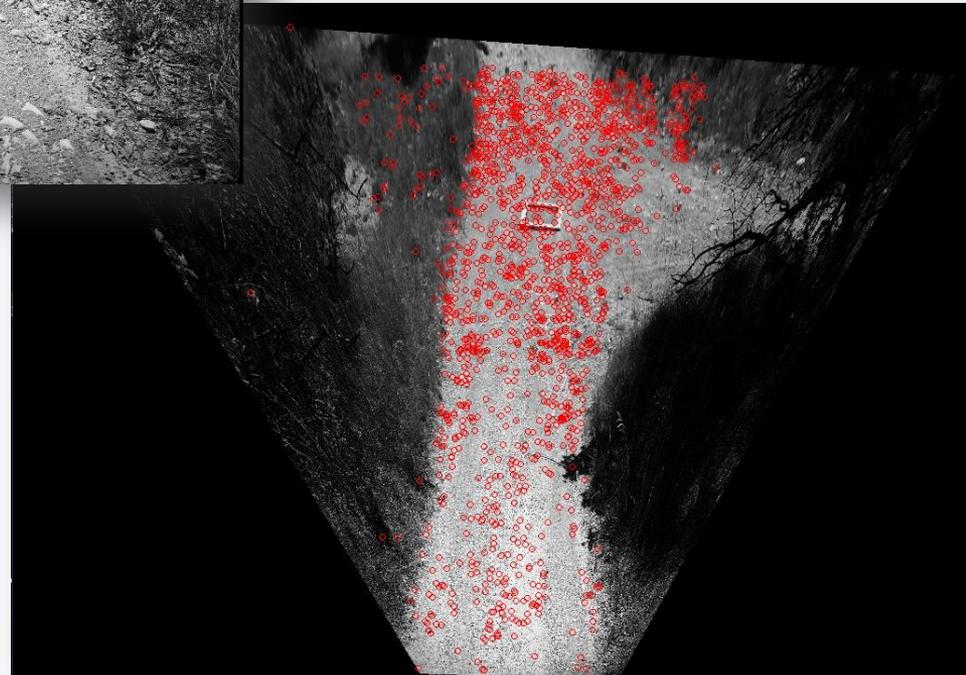
Estimation de la qualité de l'homographie



Ecart moyen : **60 cm**

Limites de notre protocole

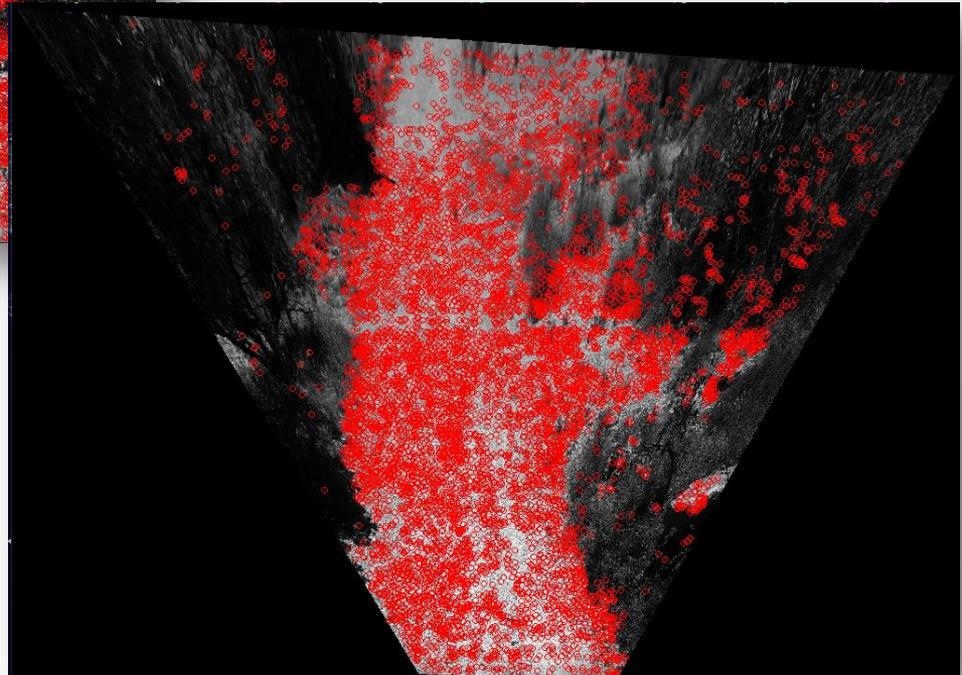
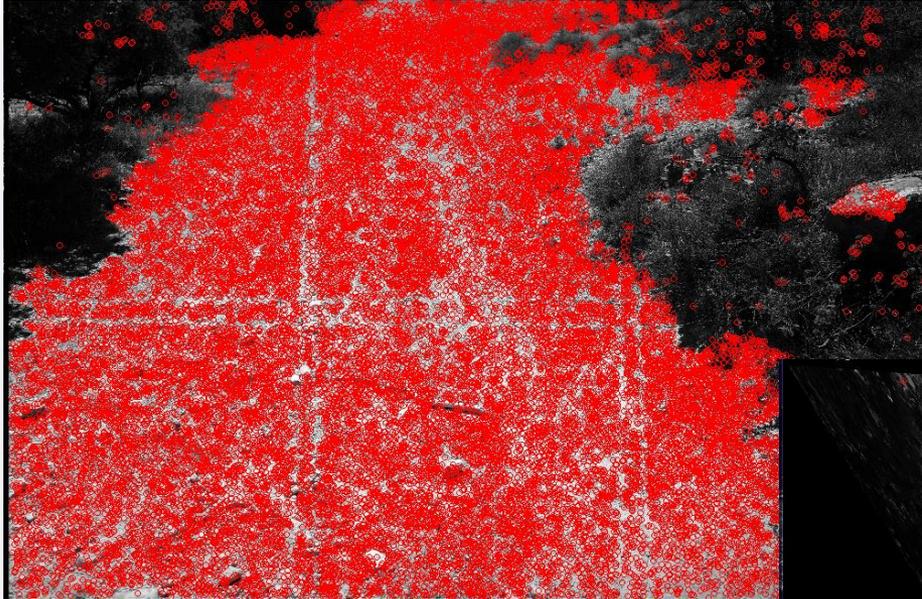
Zone peu texturée



Texture



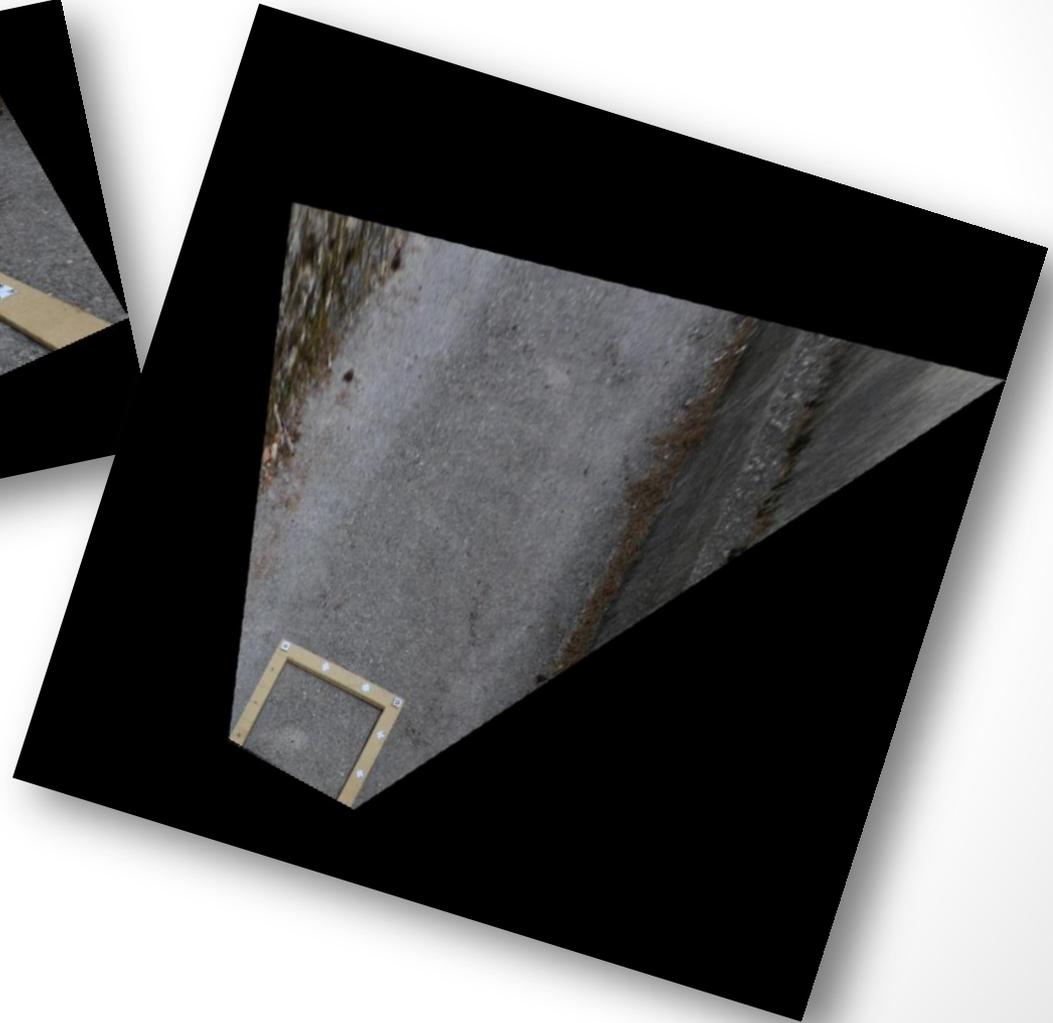
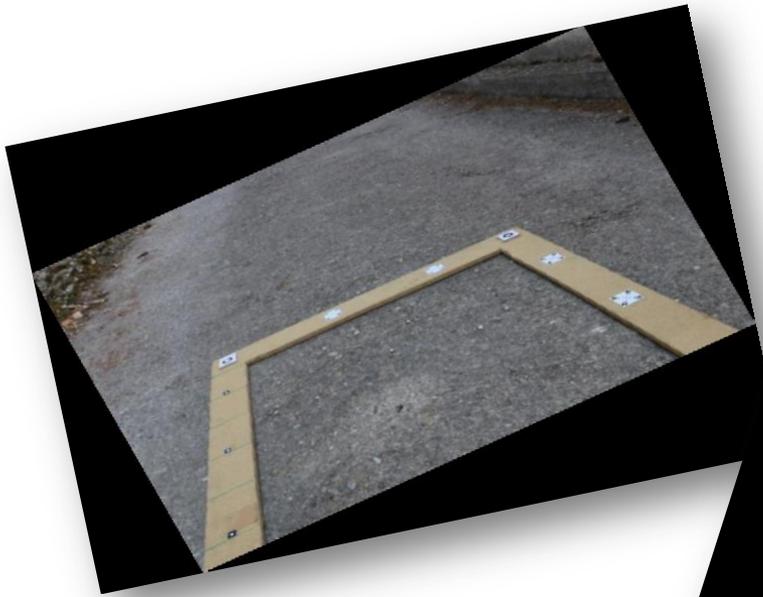
Zone texturée



Ruelle de Saint-Maime



Conclusion



Merci de votre
attention !



Des questions ?