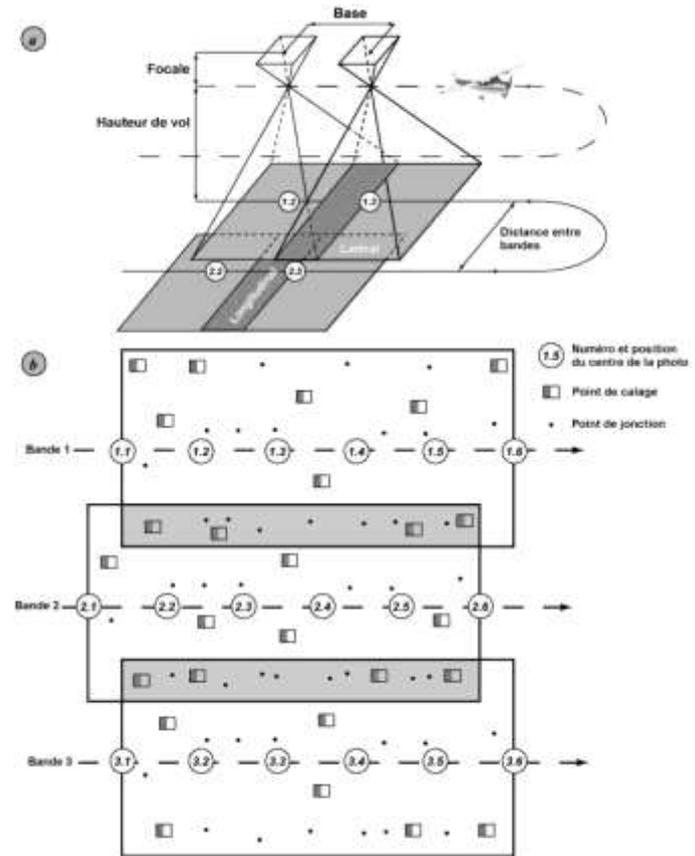
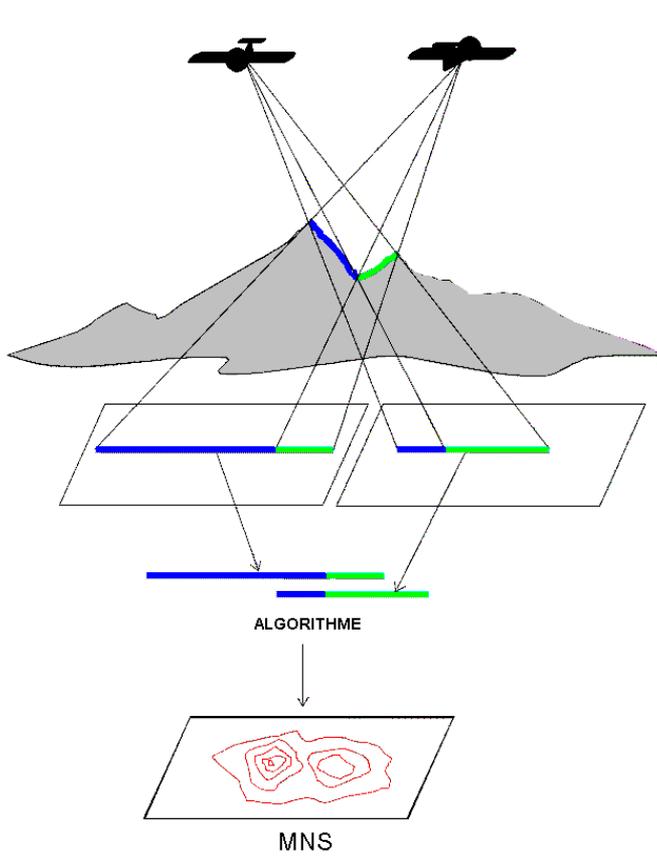


Modélisation 3D (1)

La conquête de la 3^{ème} dimension

La troisième dimension (photogrammétrie)

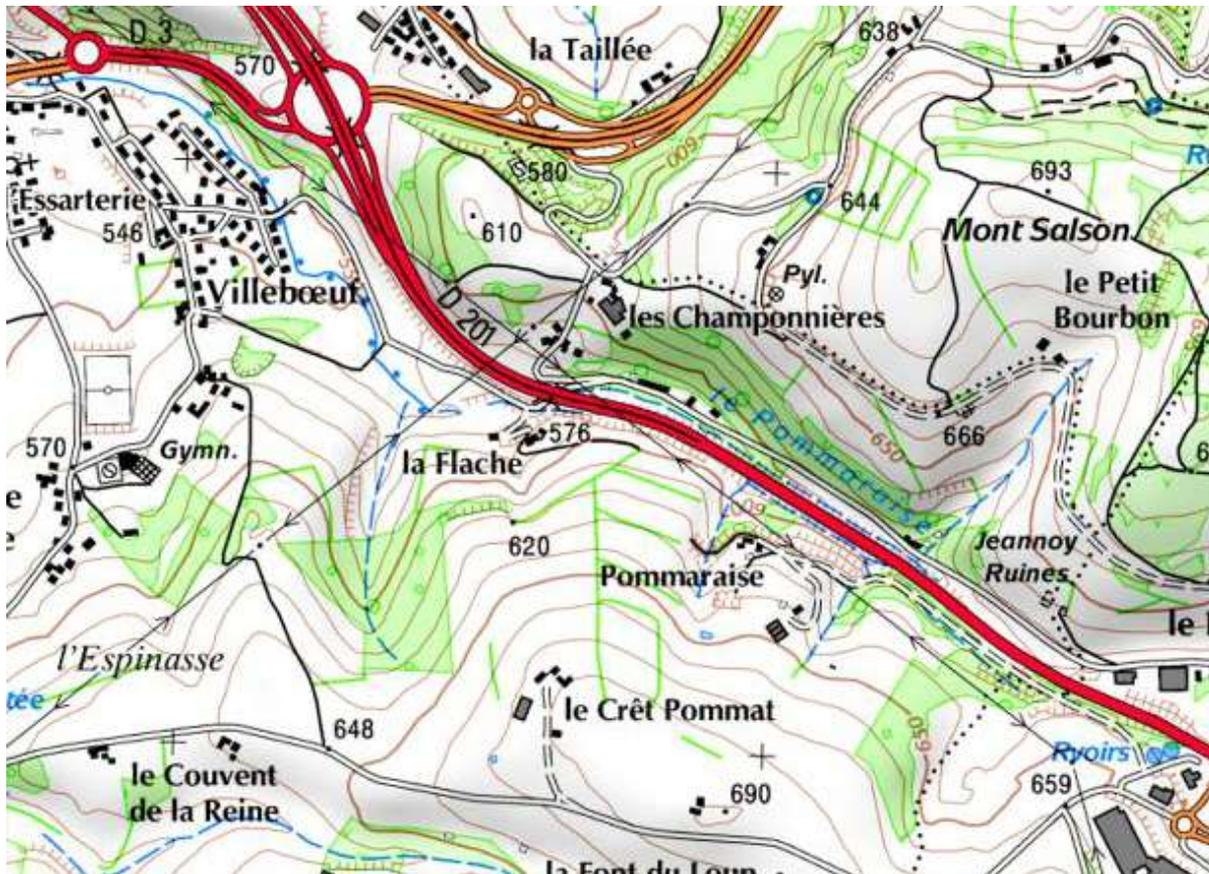


<http://jb.henry.free.fr/cours/Chapitre4.htm>

La troisième dimension (rendu cartographique)



La production automatique des courbes de niveau



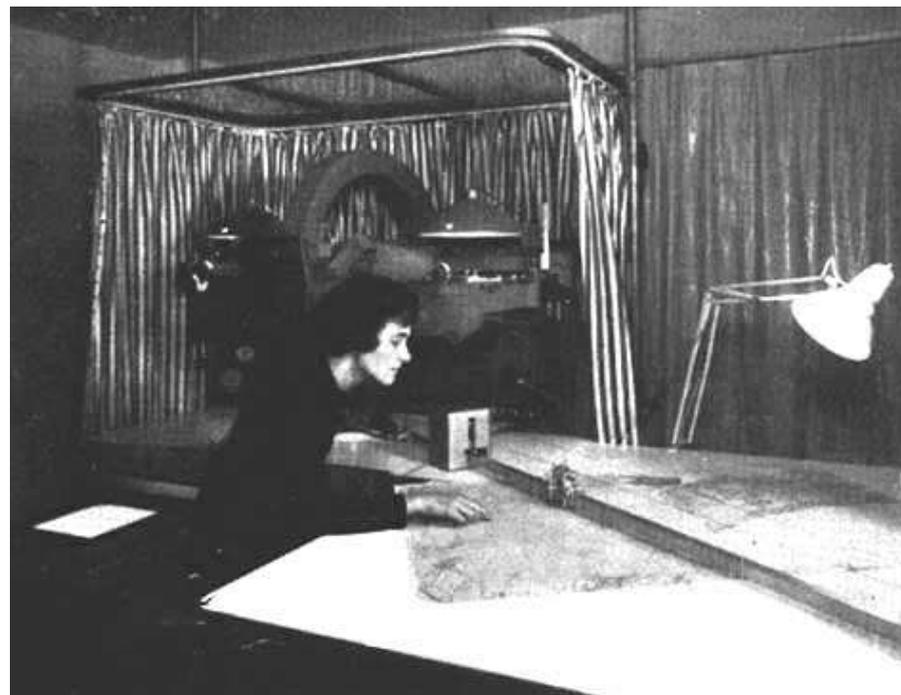
La troisième dimension (stéréo-restitution)



Kelsh Plotter - Initial machine used to launch the District's "in-house" photogrammetric mapping program in 1957.

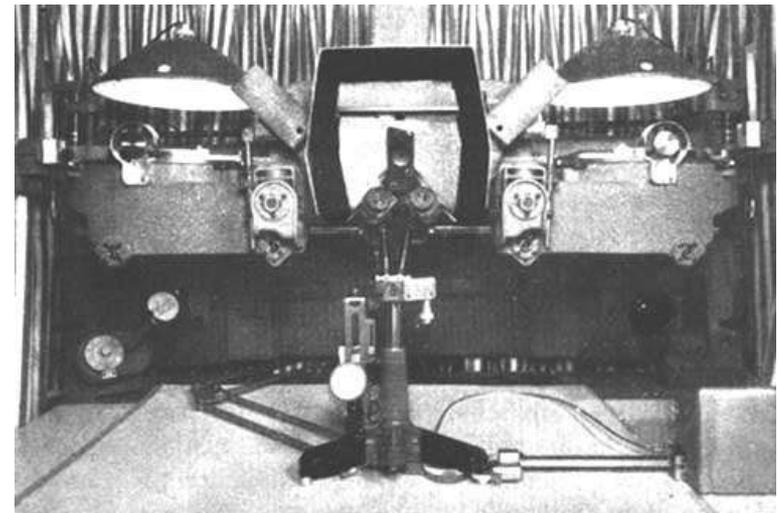
<http://www.floodcontrol.co.riverside.ca.us/History.asp>

x



<http://www.fao.org/docrep/24755F/24755f02.htm>

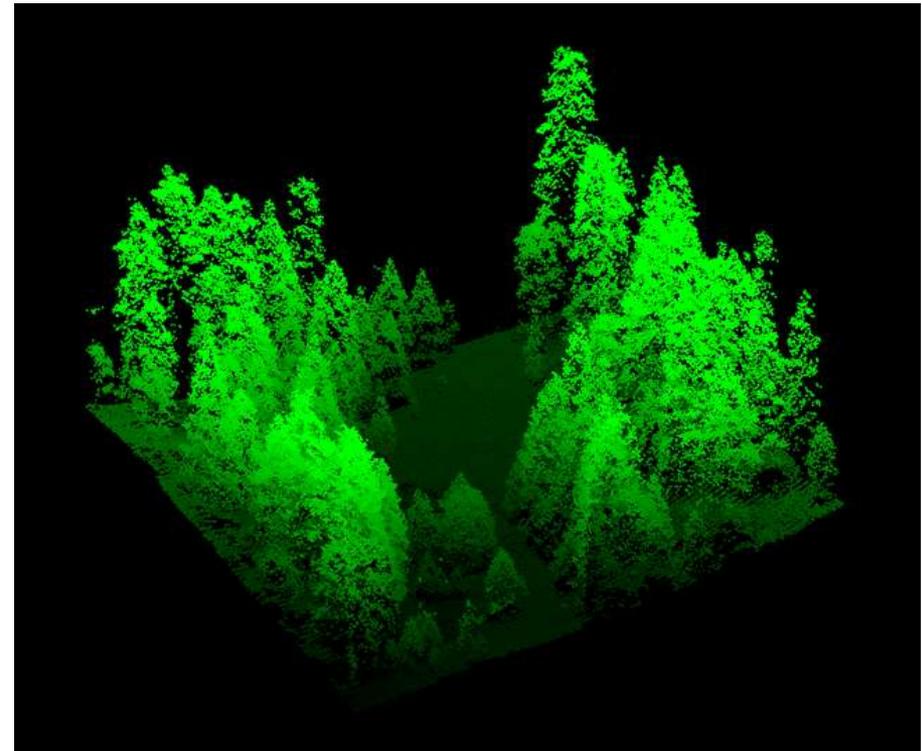
La troisième dimension (stéréo-restitution)



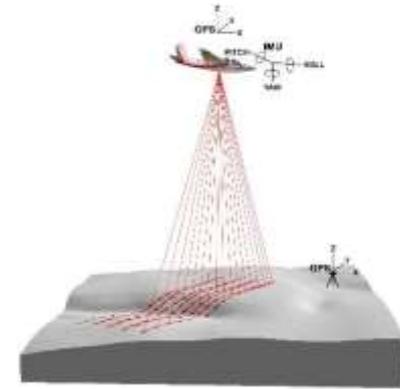
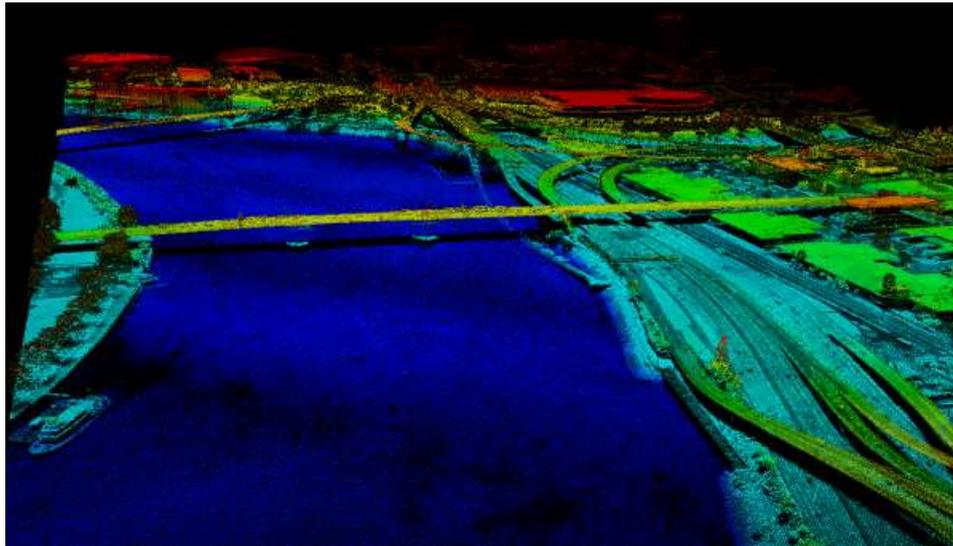
Restituteur analogique

Produire un modèle de surface par des méthodes numériques

- Plusieurs techniques :
 - Photogrammétrie
 - levés laser aéroportés
Interférométrie Laser, Lidar



Lidar



Maquettes numérique / maquettes physiques

Modeler (et modéliser) le territoire

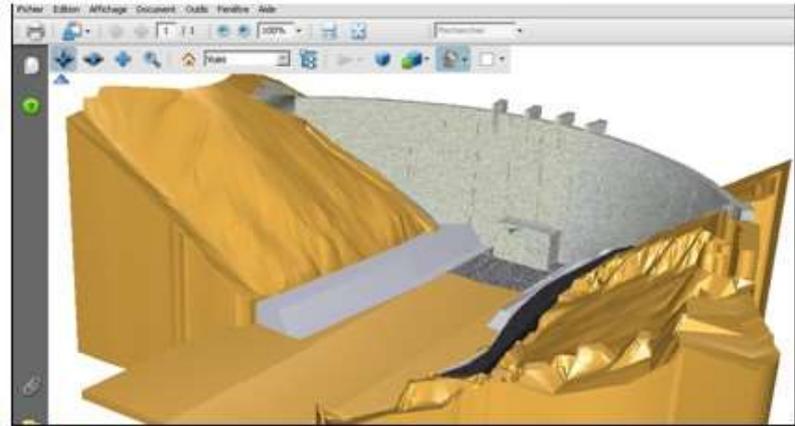


http://www.ecpad.fr/wp-content/gallery/plans_reliefs_invalides/02_2011ECPA333A006_047.jpg

Modèles numériques



http://3dzentrale.com/blog/wp-content/uploads/2012/05/texturebake_21.jpg



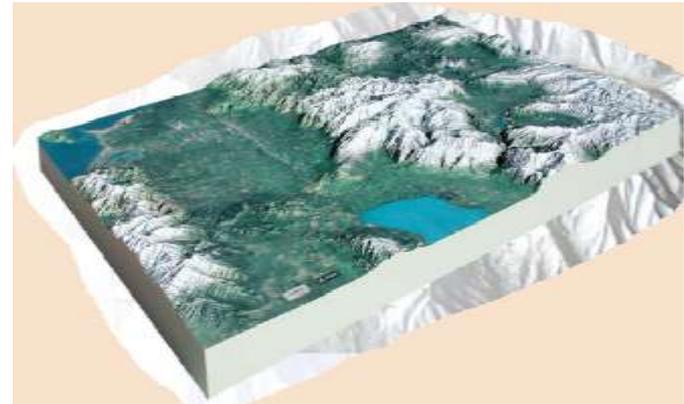
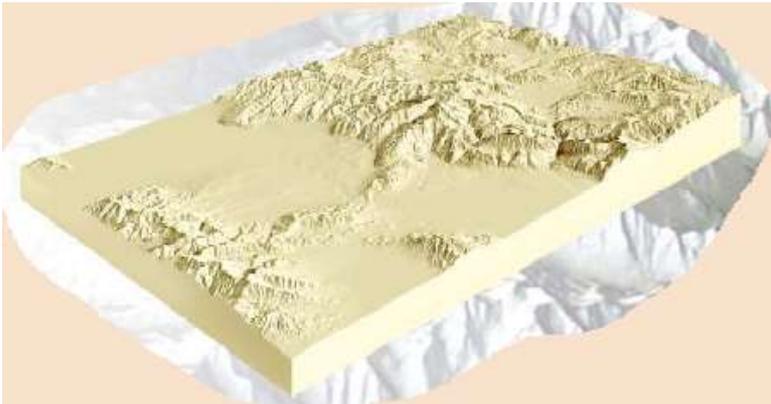
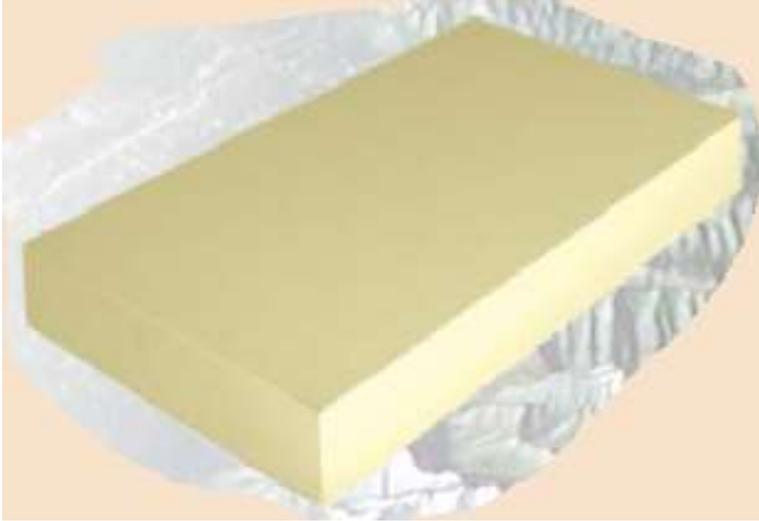
http://brli.brl.fr/maj/phototheque/photos/moyens_geo/modele_cad.jpg

Modèles physiques



[https://en.wikipedia.org/wiki/U.S. Army Corps of Engineers Bay Model](https://en.wikipedia.org/wiki/U.S._Army_Corps_of_Engineers_Bay_Model)

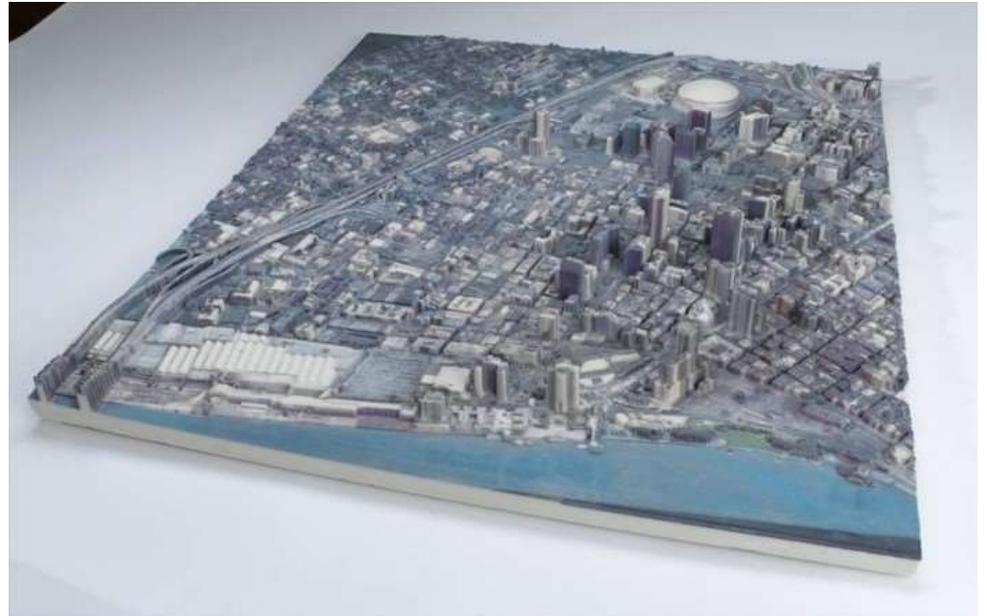
Le retour des maquettes « solides »



Afghanistan
client - National Geographic Maps
scale - 15 kilometers/inch
size - 96" x 96"
Elevation data is DTED 0 from WorldSAT
Image is LandSat7 from WorldSAT
Photography: Heather Hoffman, National Geographic Society



Source 3D Geosolutions <http://3d.geosolutions.com/present/stm.htm>



Source: société idéasolid

<http://www.ideasolid.com/applications.php?idapp=1>

Thierry Joliveau. Théorie et pratique des s