printemps des sciences
Avec le soutien de la Ministre de l'Enseignement supérieur et de la Recherche scientifique
Terre à terres
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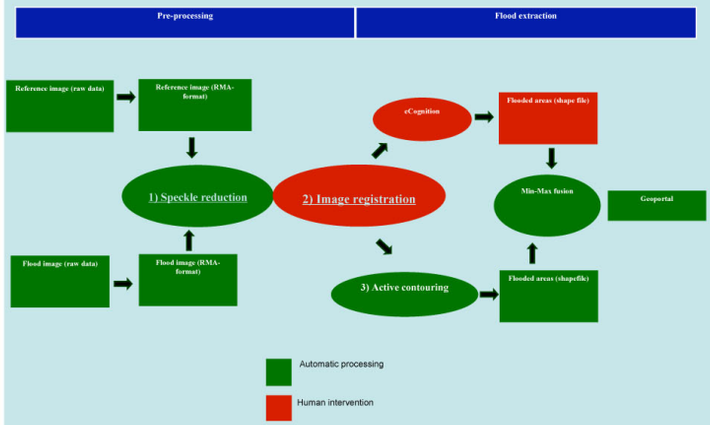
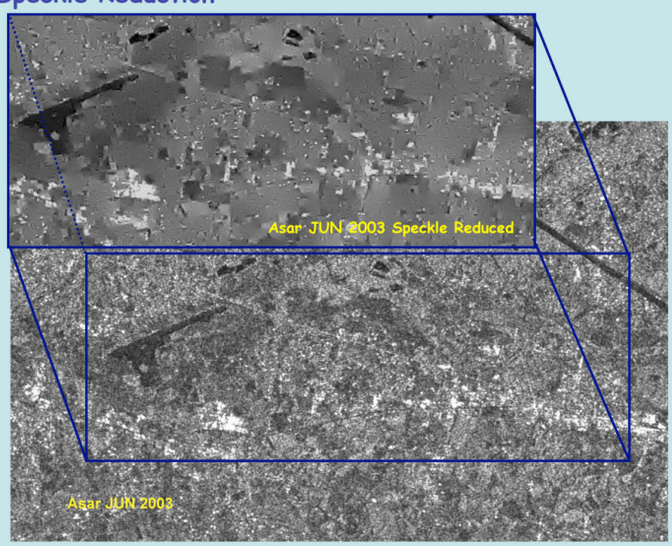
FLOODMAP: The development of an operational system to support Flanders Flood prevention policy

Heremans Roel and Borghys Dirk
(Signal and Image Centre / CISS)



1) Speckle Reduction



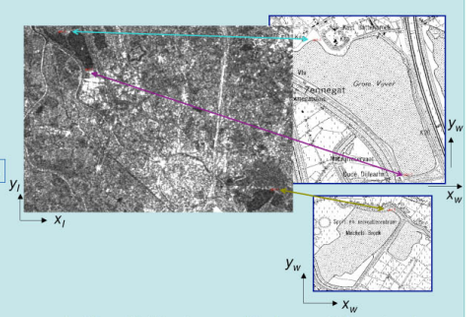
2) Georeferencing or Image registration

$$\begin{cases} x_W = A_1 + B_1 x_I + C_1 y_I \\ y_W = A_2 + B_2 x_I + C_2 y_I \end{cases}$$

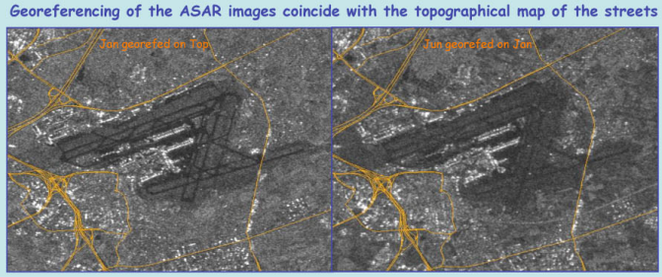
- 8 GCPs on ASAR(JAN03) & 8 cor. GCPs on

(topog + tfw)

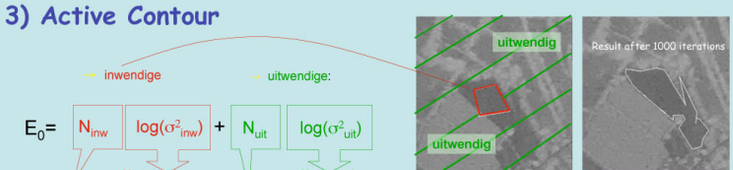
Determination of parameters

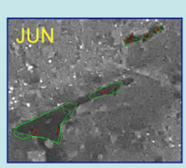


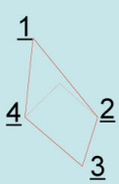
Georeferencing of the ASAR images coincide with the topographical map of the streets



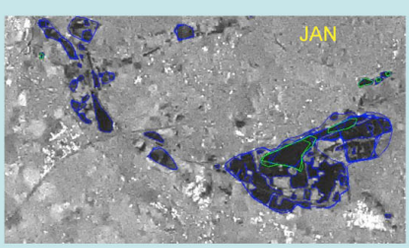
3) Active Contour





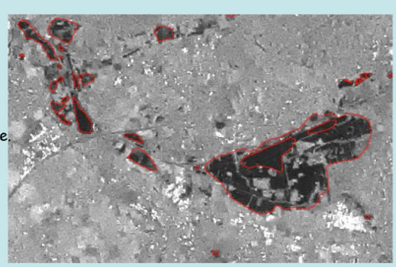


- Chose random one node (ex. 1)
- Replace this node random over Dx,Dy (uniformly distributed [-thr1,thr1])
- Calculate new energy
- If $E_{new} < E_{old}$ ➡ keep replacement of node else ➡ replace node to old position
- Continue till tries reaches max-try-parameter



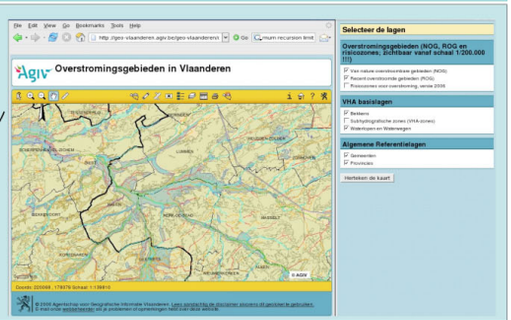
Only interested in flood areas not in existing waterbodies like rivers,canals,...

Therefore: Result on image without flood is subtracted from result obtained on a flooded image.



A www-page is build and updated using this automatic tool that was developped during the year 2003.

Have a look at:
http://geo-vlaanderen.agiv.be/geo-vlaanderen/



SIGNAL AND IMAGE CENTRE
ECOLE ROYALE MILITAIRE