



BASEGRAIN 2.0

Tutorial 01

<http://www.basement.ethz.ch/services/Tools/basegrain>

M. Detert, VAW/ETHZ

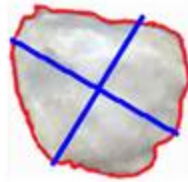


Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

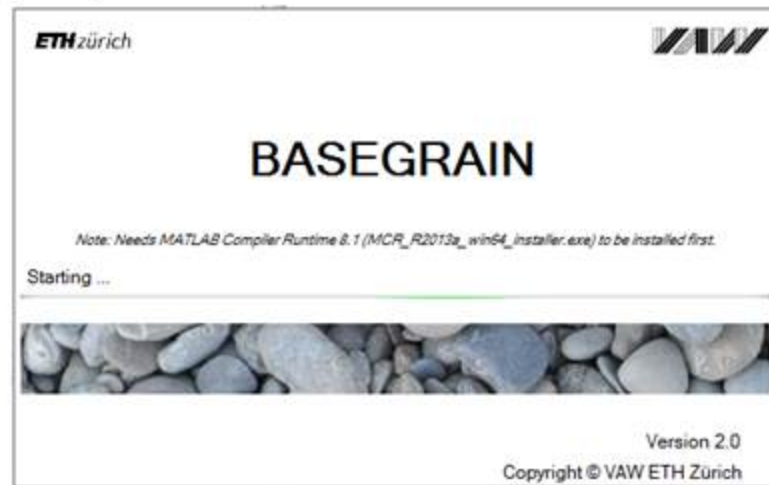


Start BASEGRAIN 2.0

- Install MCR8.1 (MCR_R2013a_win64_installer.exe) on your Win7-64bit (or Win8-64bit) computer.
- Download BASEGRAIN2.0w764.zip and copy the *.exe into a subfolder.
- Start BASEGRAIN2p0.exe.



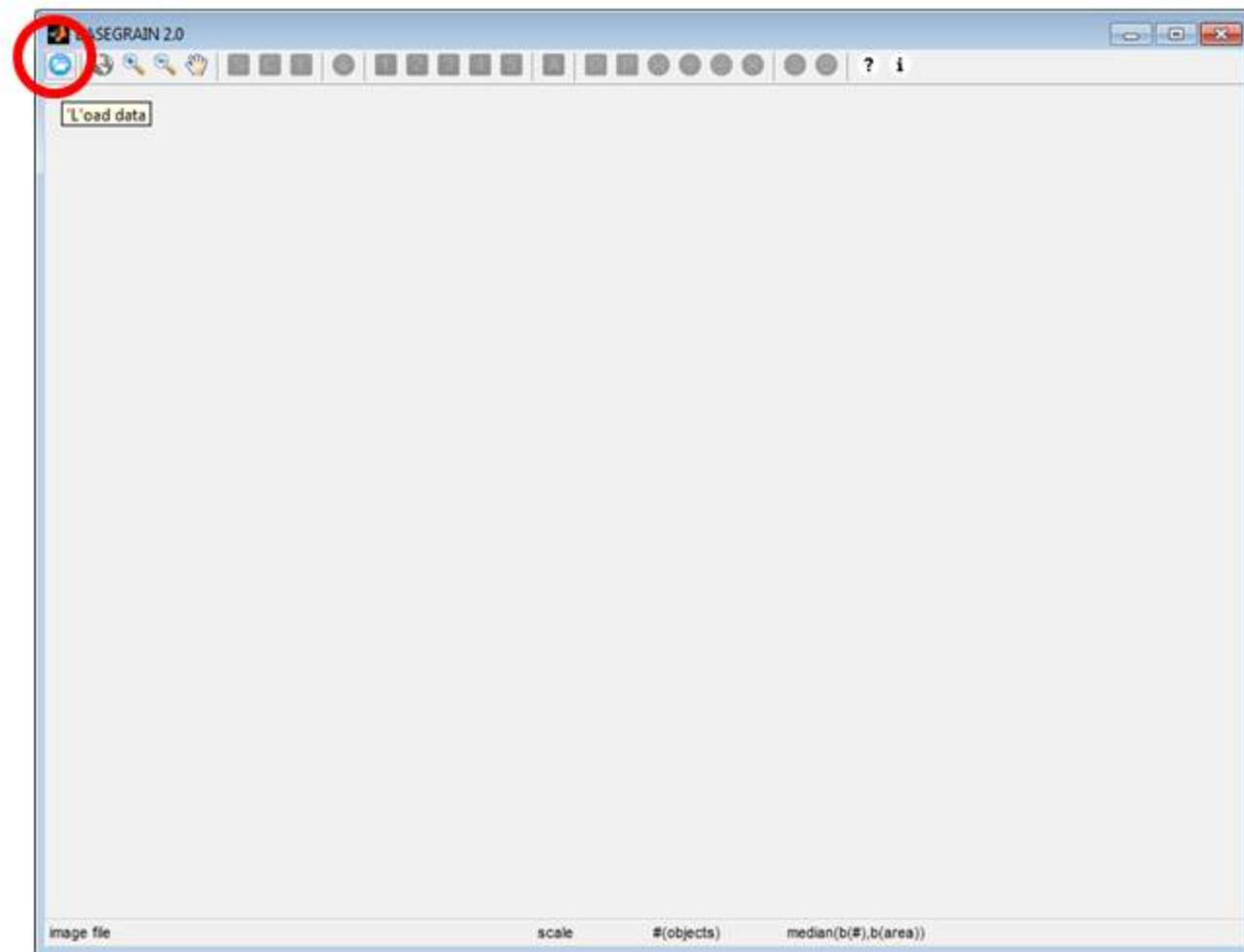
- The start screen pops up.



- In case nothing happens, please install Microsoft .NET Framework 4.5.

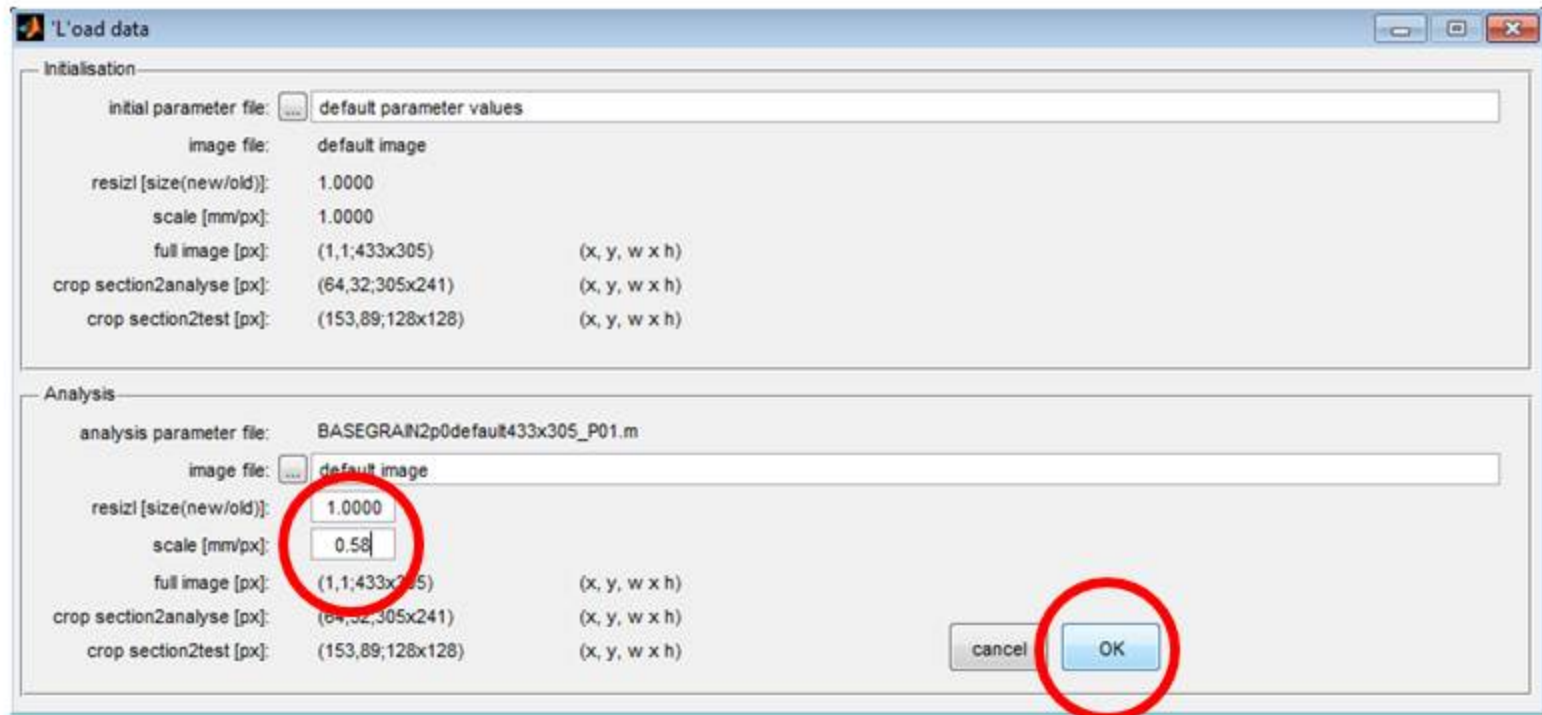
Import data

- Click the *Load Data* button (or short cut 'L').



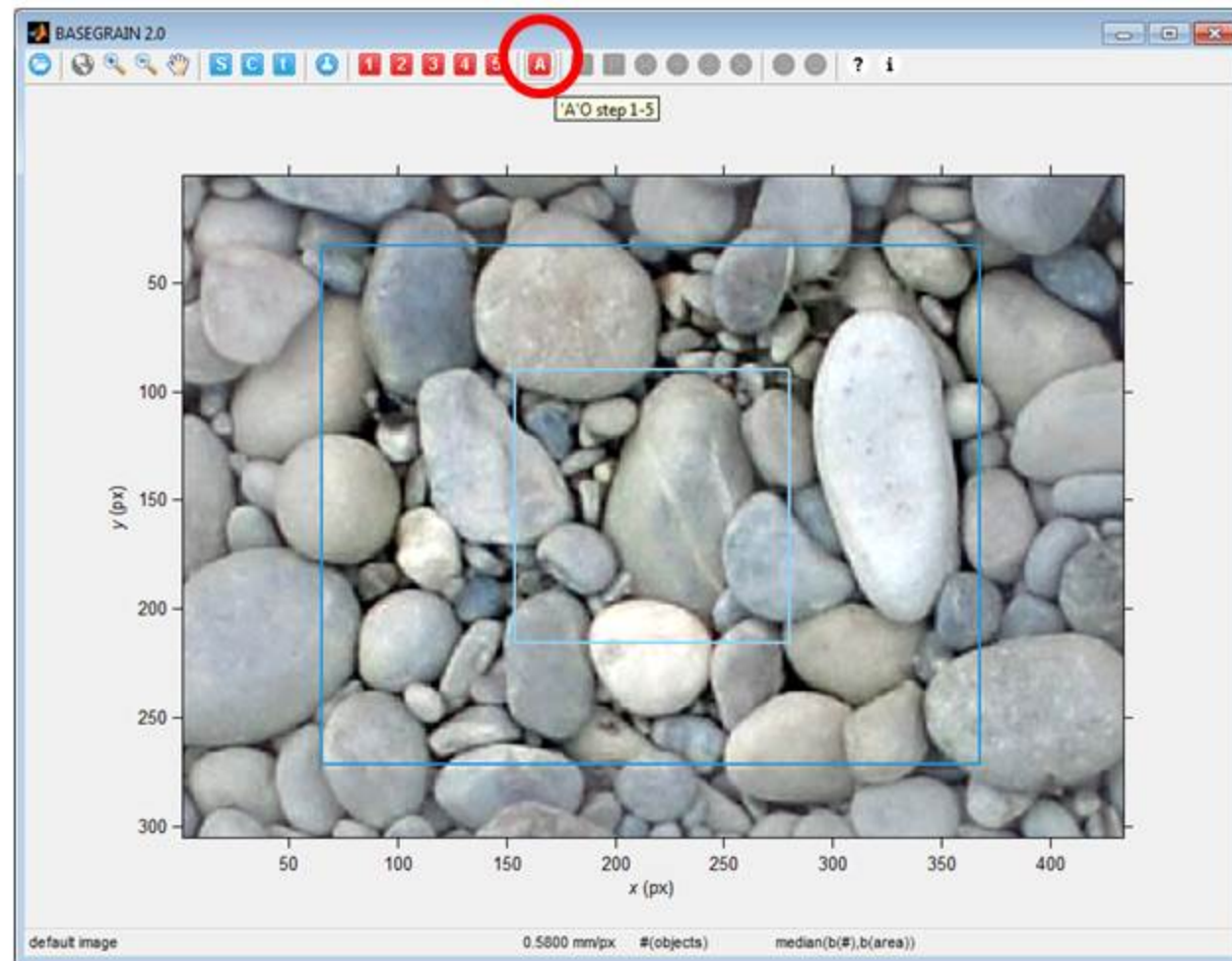
Import data and scaling

- Change the scale to 0.58 mm/px.
- Click the OK button.



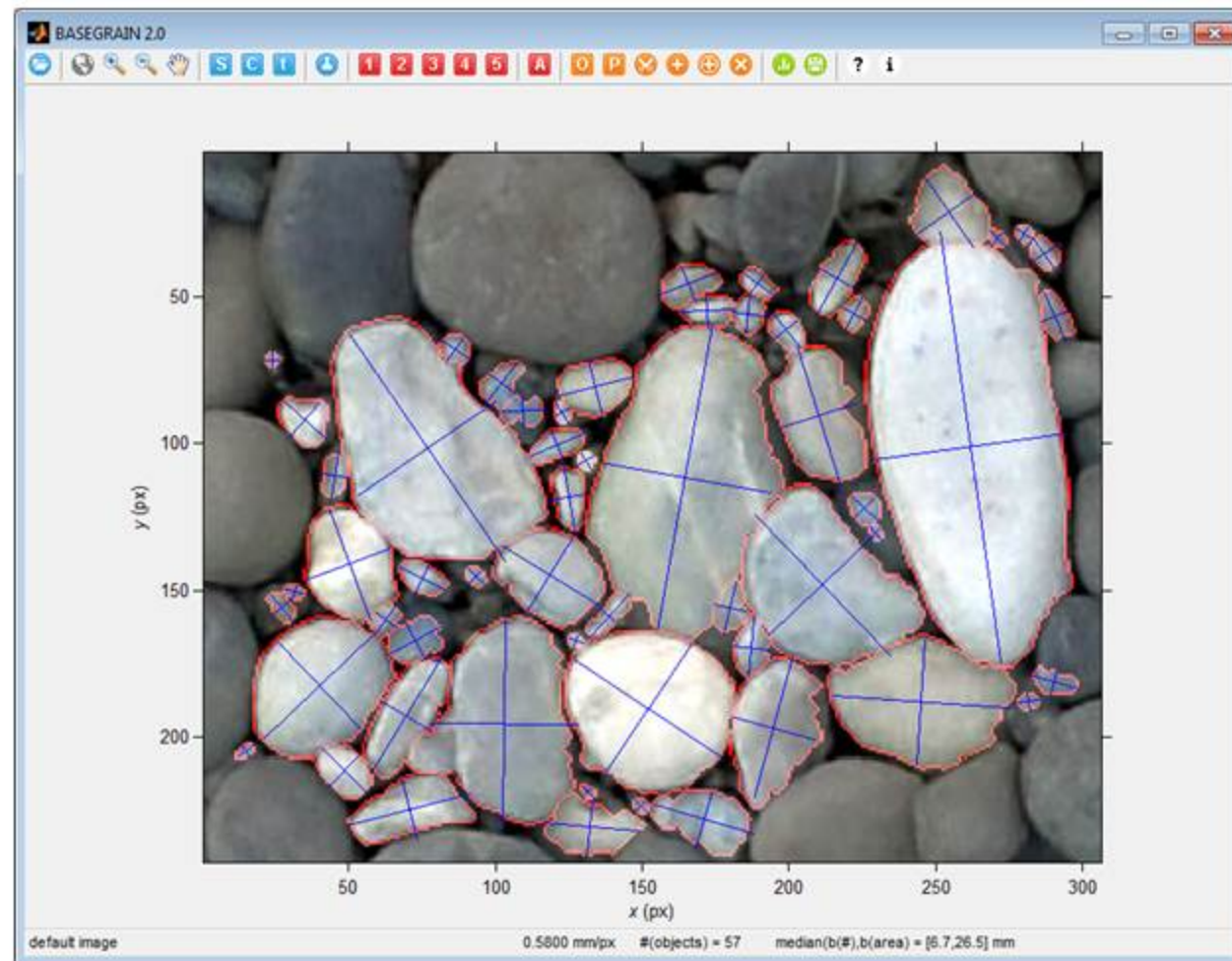
Automatic object detection

- Click the 'A'O Step 1-5 button (see: Detert & Weitbrecht, River Flow 2012).



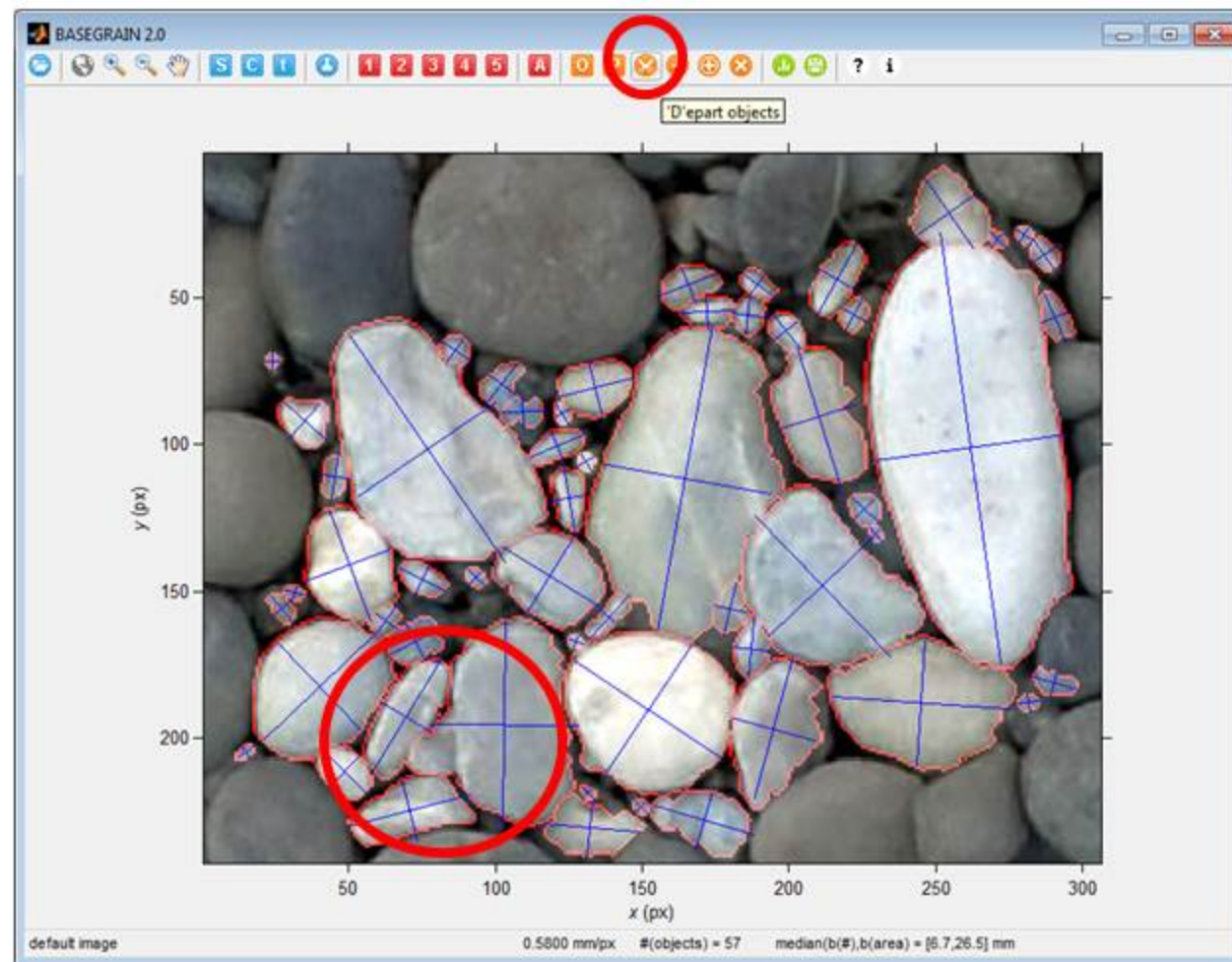
Automatic object detection

- Tataa!



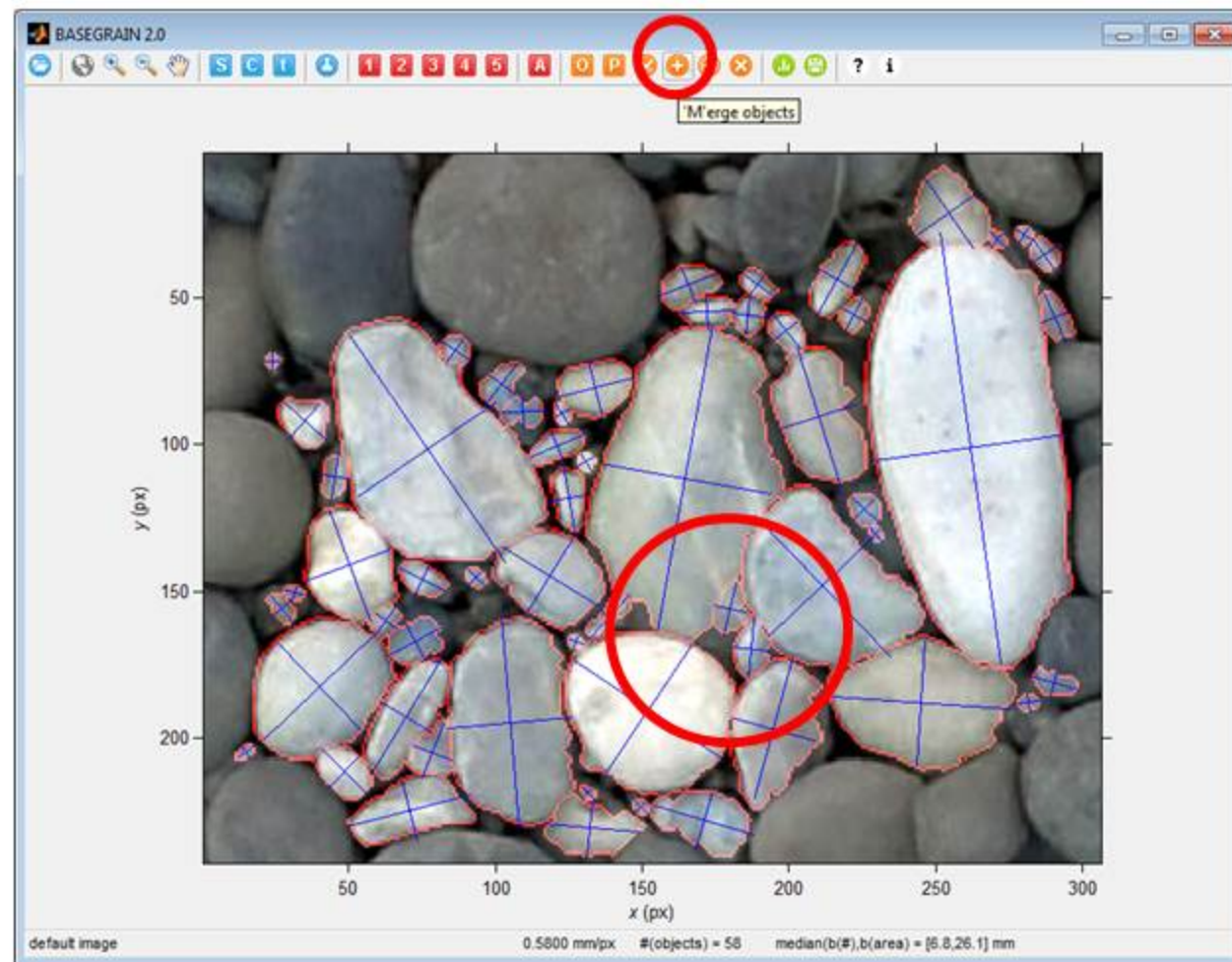
Semi-automatic object detection

- Click the '*D'epart objects*' button. Left mouse clicks define a single line, a right mouse click finishes the current line, & a final right mouse click ends the process.



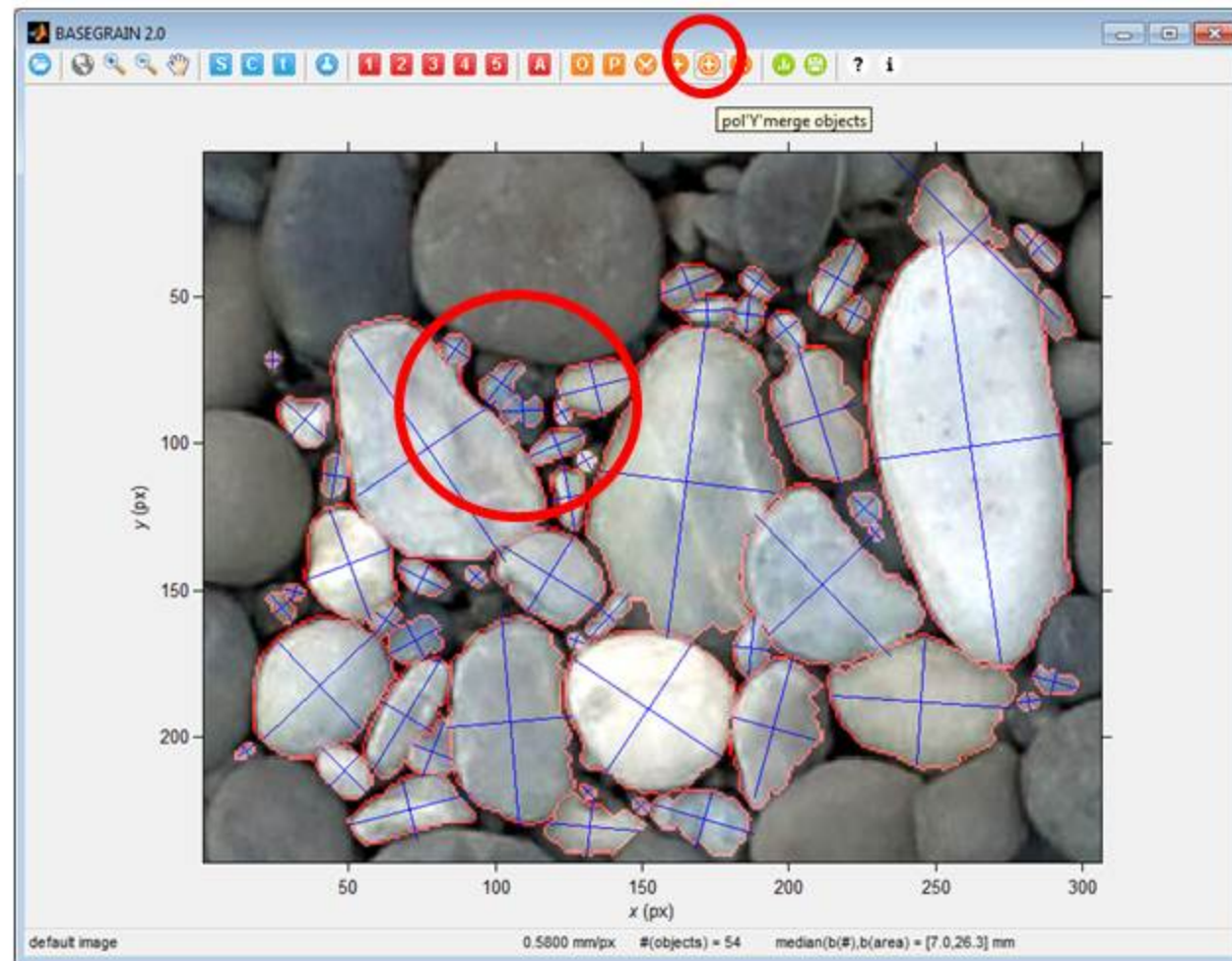
Semi-automatic object detection

- Click the '*M*erge objects' button. Left mouse clicks merge single areas, a right mouse click finishes the current area, & a final right mouse click ends the process.



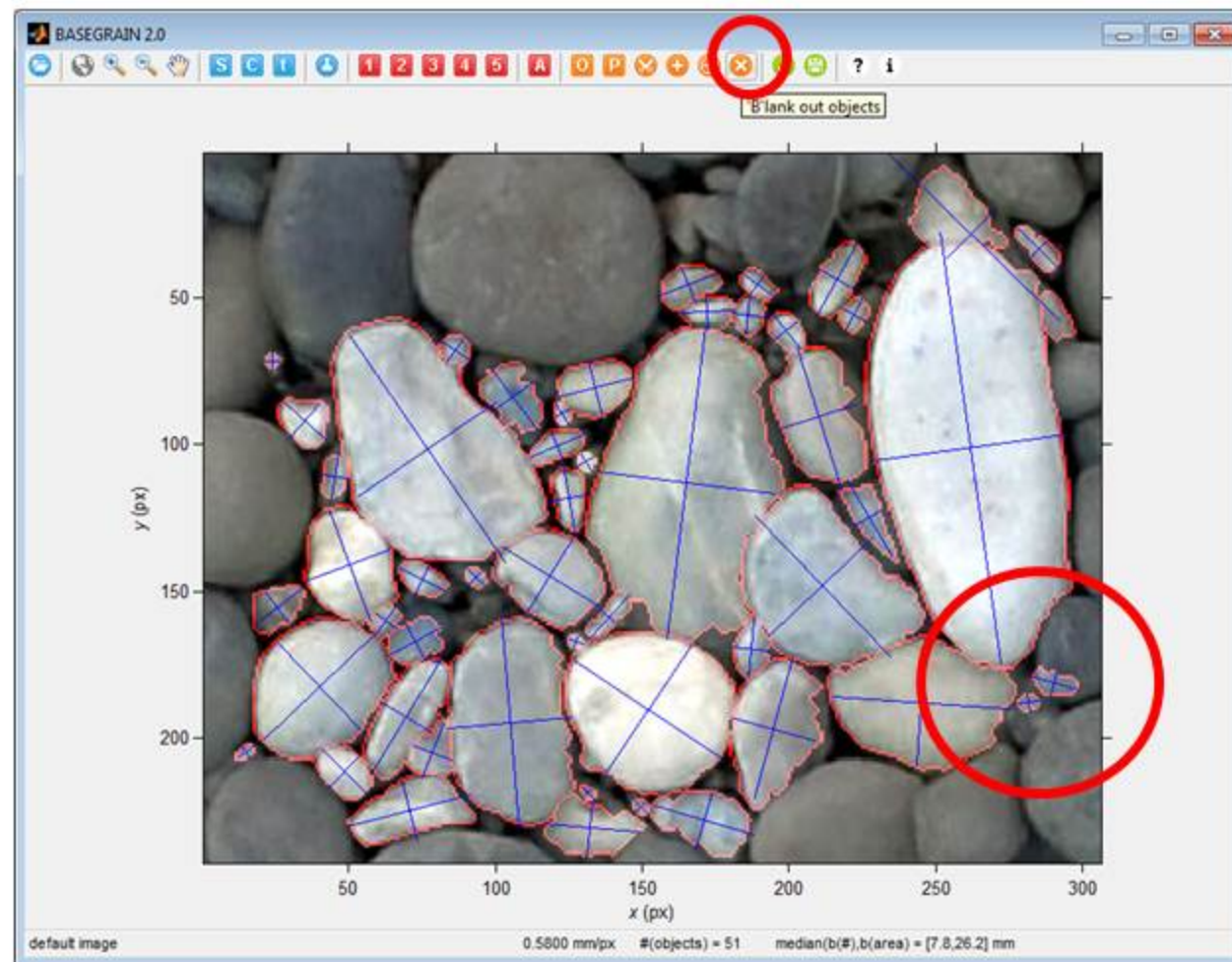
Semi-automatic object detection

- Click the *pol'Y merge objects* button. Left mouse clicks define single areas, a right mouse click finalizes the current area, & a final right mouse click ends the process.



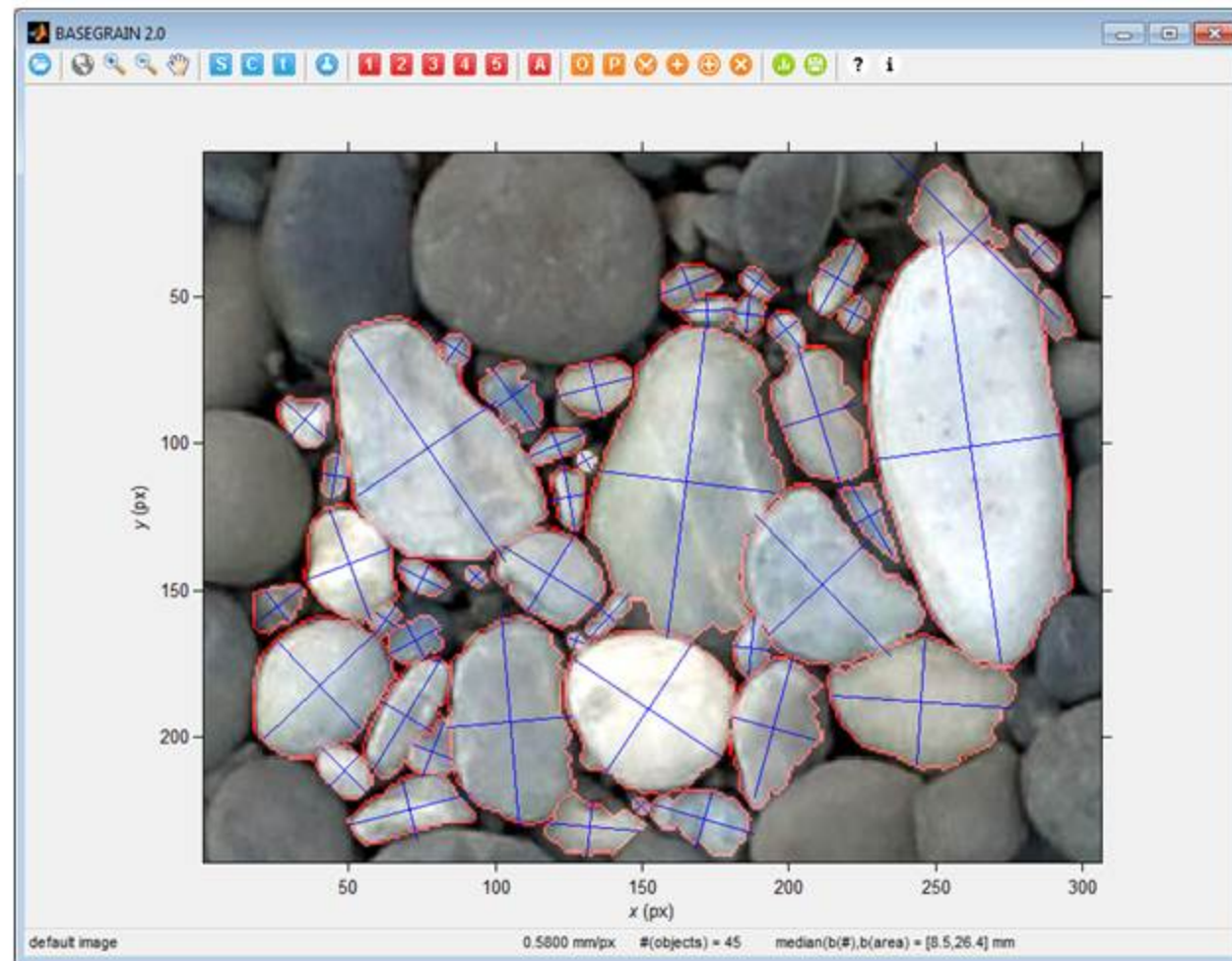
Semi-automatic object detection

- Click the '*B*'lank out objects button. Left mouse clicks blank out single areas, & a final right mouse click ends the process.



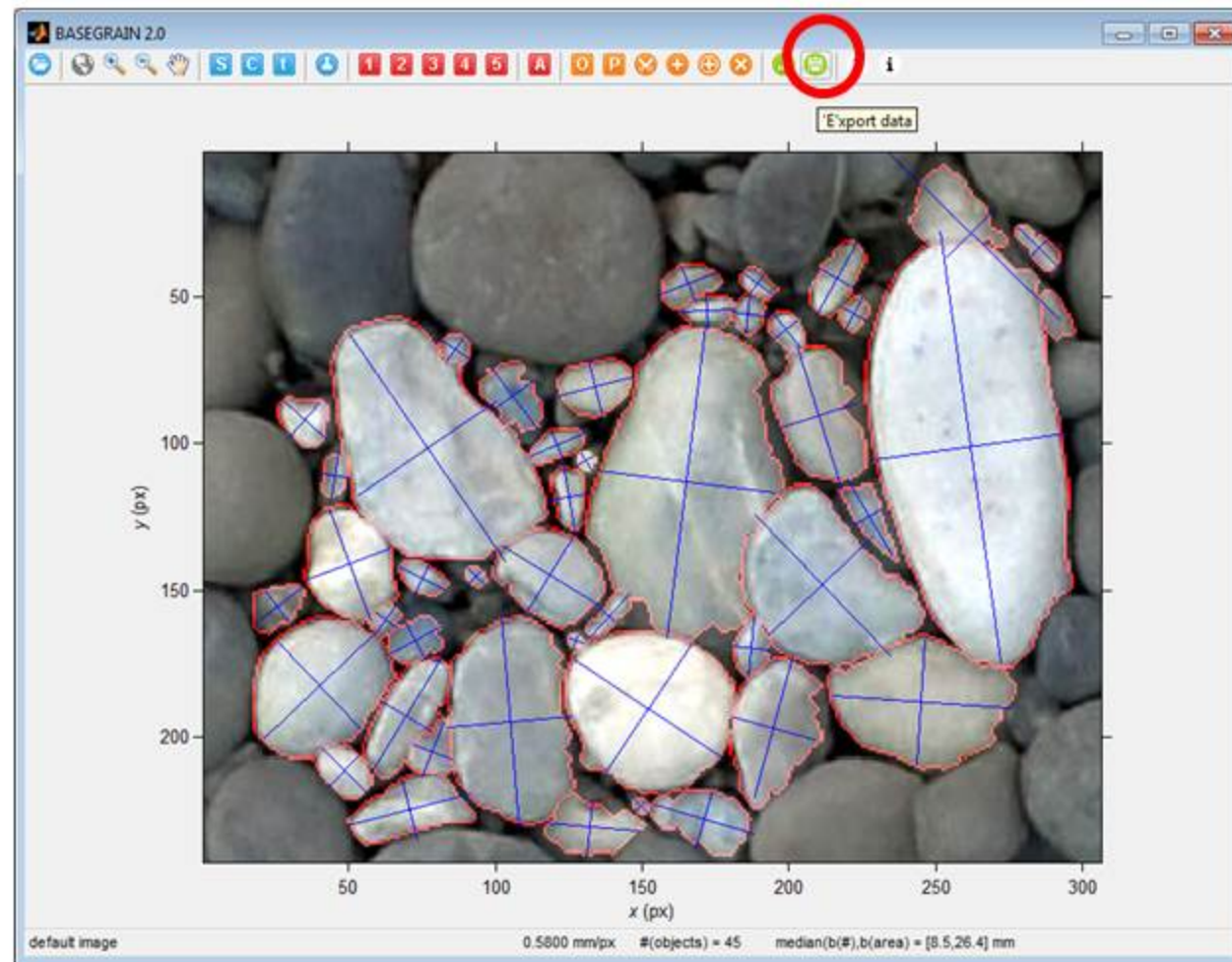
Semi-automatic object detection

- After some sensible left and right mouse-clicks.... Tataa!



Export data

- Click the 'Export Data' button.



Export data

- Save as Excel file, and open it.

Export data

Controls

control parameter file: BASEGRAIN2p0default433x305_P01.m

image file: default image

scale [mm/px]: 0.5800

save openTXT

Results2EXCEL

result file: BASEGRAIN2p0default433x305_P01.xlsx

save openXLSX

Works only if EXCEL is installed.

Results2MATLAB

result file: BASEGRAIN2p0default433x305_P01.mat

save openMAT

Results2GIS

result file: BASEGRAIN2p0default433x305_P01.shp

phi(WGS84) [°, ', "]:	47.00	24.00	36.00	phi(WGS84) [°]:	699999.76	checkWGS
lambda(WGS84) [°, ', "]:	8.00	30.00	20.00	lambda(WGS84) [°]:	099999.97	
h(WGS84) [m]:	500.00			h(WGS84) [m]:	600.05	
				Xy(CH1903) [m]:	699999.76	WGS2shp WGS2kml openKML
				Yx(CH1903) [m]:	099999.97	
				h(CH1903) [m ü.M.]:	0600.05	

checkCH

CH2shp CLOSE

View results

- Explore and enjoy the results.

	A	B	C	D	E	F	G	H	I	J	K
1	ID	a	b	a	b	area	x	y	orientation		
2	[-]	[mm]	[mm]	[px]	[px]	[px]	[px]	[px]	[deg]		
3	1	30.8523274	24.5851825	53.1936679	42.3882457	1755	39.9481481	182.458689	43.4722409		
4	2	12.1786946	8.38678086	20.9977492	14.459967	230	25.6565217	155.504348	36.786446		
5	3	11.4972268	9.41641059	19.8228049	16.2351907	242	35.0785124	91.7603306	-41.633329		
6	4	23.4972933	17.7415284	40.5125746	30.5888421	963	50.3208723	141.020768	-69.6535675		
7	5	13.2769053	8.77428479	22.891216	15.1280772	268	48.4589552	211.291045	-44.3320919		
8	6	9.34118193	5.22060588	16.1054861	9.00104462	111	45.3063063	110.882883	81.5424203		
9	7	54.5667436	33.1759834	94.0805924	57.1999713	4099	76.8960722	101.445962	-55.54963		
10	8	25.1437916	11.9655113	43.3513649	20.6301918	653	70.8162328	224.620214	14.6166753		
11	9	27.296691	11.2211008	47.0632603	19.3467255	700	69.5257143	192.68	58.8615263		
12	10	7.42739573	5.44850069	12.8058547	9.3939667	91	62.4505495	159.967033	54.0876001		
13	11	11.7251925	8.66913569	20.2158491	14.9467857	231	72.6796537	166.987013	28.2376745		
14	12	10.7637133	6.28282611	18.5581264	10.8324588	156	75.2051282	145.782051	-27.4204314		
15	13	11.7159571	8.10070021	20.1007527	14.6217057	210	70.5047610	204.914296	60.110954		
16	14	11.7159571	8.10070021	20.1007527	14.6217057	210	70.5047610	204.914296	60.110954		

In Tutorial 01 you should have learned how to...

- Start BASEGRAIN 2.0
- Import data
- Insert a scaling factor
- Detect objects (semi-)automatically
- Export results to EXCEL

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