

eCognition 8 workshop

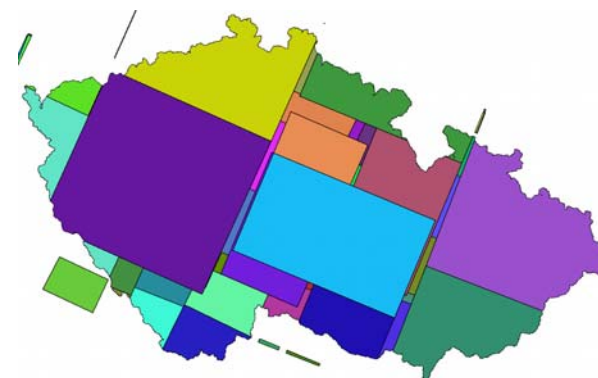
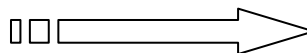
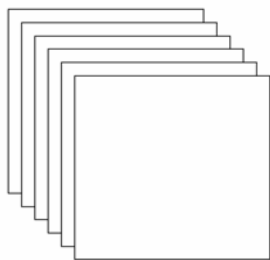
Případová studie: Automatická tvorba zájmových území pro klasifikaci

Praha , 3.3.2010

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- Vytvoření databáze a mozaiky zájmových území v závislosti na dostupných multitemporálních scénách a podle vybraných kritérií

Vstupní scény:



Kritéria:

oblačnost
čas pořízení
velikost zájmového území
...

- Masky mraků
- Hranice scén

Modify Project

Image Layers Thematic Layers Metadata Maps

Project Name:

Map:

Coordinate System: Geographic (lat./long) WGS 84
 Resolution (Degrees): 0.0031441243
 Pixel Size: 0.0031441243
 Project Size: 1057947490 pixels
 Geocoding (Lower Left): (-1.03767606215 / 37.72689724295)
 Geocoding (Upper Right): (32.22401490755 / 61.24494700695)

Percent (%):

Use geocoding

Pixel size (unit):

Metres

Image Layer Alias	File Location	Res.	Unit	Type	Wi...	He...	N	Lower Le...	Lower L...	Upper Ri...	Upper Ri...
Layer 4	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080622_095942_000001882069_00380_32999_4984-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	7313	4404	-	1.3515129	47.397879	24.344494	61.244602
Layer 5	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080622_100218_000001992069_00380_32999_4985-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	5971	4544	-	-1.0376761	37.757084	17.73589	52.083985
Layer 6	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080728_092806_000001852070_00394_33514_4086-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	7294	4353	-	9.2915469	47.526345	32.224792	61.214718
Layer 7	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080731_093627_000001992070_00437_33957_8635-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	5985	4545	-	5.4170789	37.737703	24.17178	52.027748
Layer 8	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080807_091620_000001992071_00036_33657_0140-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	5964	4544	-	10.444471	37.733341	29.196028	52.020242
Layer 9	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080831_095940_000001852071_00380_34001_5982-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	7284	4353	-	1.3733859	47.479529	24.275187	61.165902
Layer 10	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080910_094752_000001992072_00022_34144_7599-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	5964	4544	-	2.5478619	37.726897	21.239419	52.013798
Layer 11	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNPDE20080913_095537_000001992072_00065_34187_0922-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	5967	4545	-	1.116727	37.750792	19.877117	52.040837
Layer 2	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNUPA20080306_095550_000000982066_00337_31453_1770-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	3383	2330	-	9.8819149	46.11763	20.518487	53.44344
Layer 2	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNUPA20080414_093014_000000982067_00394_32011_1771-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	3223	2235	-	10.600619	46.319689	20.734132	53.346787
Layer 3	E:\Euroland\Sandwich_MERIS_C2\mens2008_select\CC\MER_FR_1PNUPA20080531_095300_000000982069_00065_32684_1772-cloudmask.tif [1]	0.0031441243	Degrees	8bit unsigned	3372	2330	-	10.543269	45.981972	21.145256	53.307782

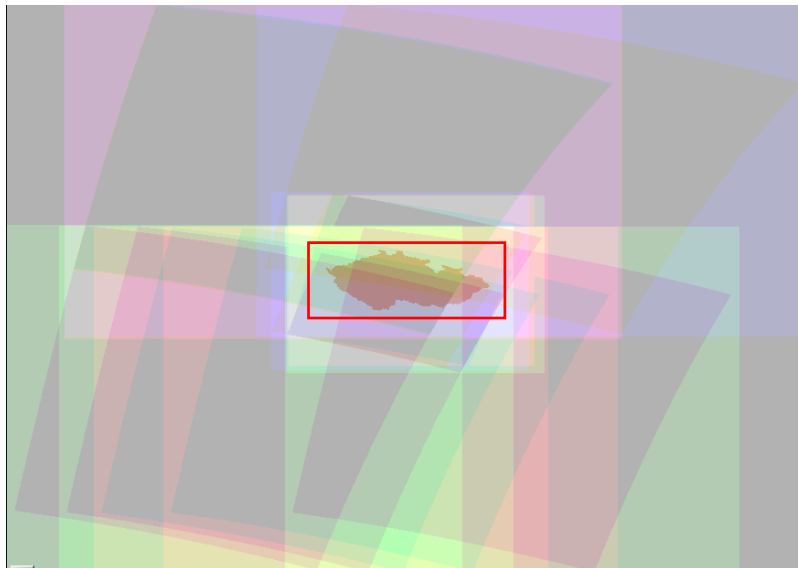
Attribute table

	Wi...	He...
sandwich_MERIS_C2\mens2008_select\FDOT\MER_FR_1PNUPA20080531_095300_000000982069_00065_32684_1772-footprint.shp	3331	2321
sandwich_MERIS_C2\mens2008_select\FDOT\MER_FR_1PNPDE20080622_095942_000001882069_00380_32999_4984-footprint.shp	7067	4327
sandwich_MERIS_C2\mens2008_select\FDOT\MER_FR_1PNPDE20080728_092806_000001852070_00394_33514_4086-footprint.shp	7061	4315
sandwich_MERIS_C2\mens2008_select\FDOT\MER_FR_1PNPDE20080807_091620_000001992071_00036_33657_0140-footprint.shp	5756	4509
sandwich_MERIS_C2\mens2008_select\FDOT\MER_FR_1PNPDE20080731_093627_000001992070_00437_33957_8635-footprint.shp	5758	4509

Metadata Name

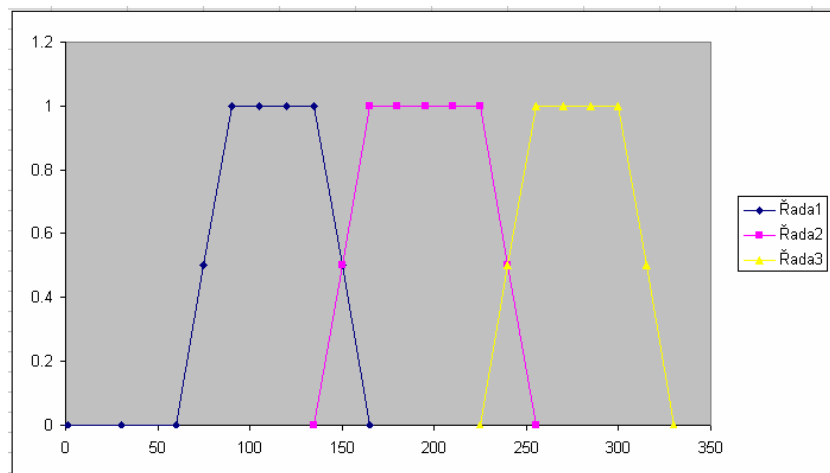
Ok Cancel

- Segmentace
- Vymezení zájmového území



- PARAMETRIZACE
 - 04:04.722 1 CREATE ROI (*)
 - 04:04.238 chess board: 1000000 creating 'L0'
 - 11.985 2 AOI (*)
 - 11.641 unclassified with Thematic object ID: CZ_shp = 0 at L0: AOI
 - 0.016 unclassified at L0: out of AOI
 - 5 TIME DIFFERENCE
 - NULOVANI OBJ. VARIABLE (T1,T2, T3...)
 - AOI at L0: T1obj = 0
 - AOI at L0: T2obj = 0
 - AOI at L0: T3obj = 0
 - AOI at L0: T4obj = 0
 - AOI at L0: T5obj = 0
 - AOI at L0: T6obj = 0

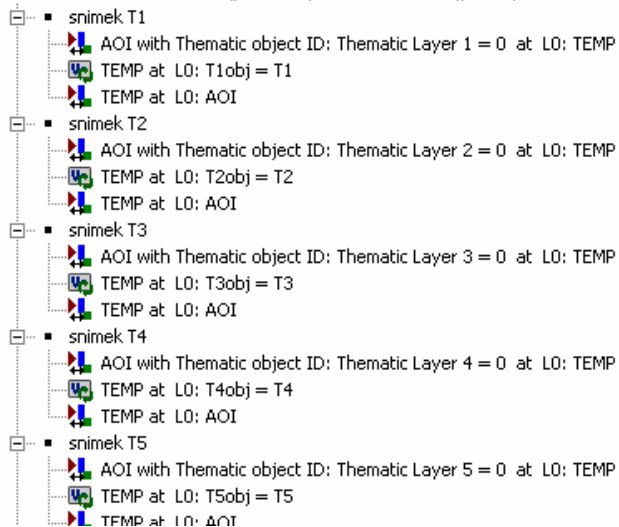
- Načtení/doplnění proměnných
- Čas pořízení scén, hranice požadovaných časových oken, maximální podíl oblačnosti (apod.)



```
■ NAPLNENI PROMENNYCH
■ [a] SCENE VARIABLE (naplni scene variable T1, T2... prislusnou hodnotou JD z daneho souboru))
  load parameter set '(:Workspc.OutputRoot)\parameter_sets\prm_set_1.psf'
■ b) SCENE VARIABLE primo v definici
  at LO: T1 = 20080306095550
  at LO: T2 = 20080414093014
  at LO: T3 = 20080531095300
  at LO: T4 = 20080622095942
  at LO: T5 = 20080622100218
  at LO: T6 = 20080728092806
  at LO: T7 = 20080731093627
  at LO: T8 = 20080807091620
  at LO: T9 = 20080831095940
  at LO: T10 = 20080910094752
  at LO: T11 = 20080913095337
  at LO: TW1_low = 20080229000000
  at LO: TW1_up = 20080613240000
  at LO: TW2_low = 20080514000000
  at LO: TW2_up = 20080911240000
  at LO: TW3_low = 20080812000000
  at LO: TW3_up = 20081125240000
  at LO: CC_limit_up = 0.1
```

- Přiřazení scény ke každému segmentu
- Výpočet podílu oblačnosti

APPEND TIME TO ROI (přidá object variable T1obj, T2obj hodnotu JD příslušné scény, pokud tam zasahuje)



CLOUDS share



- Přirazení seznamu scén ke každému segmentu

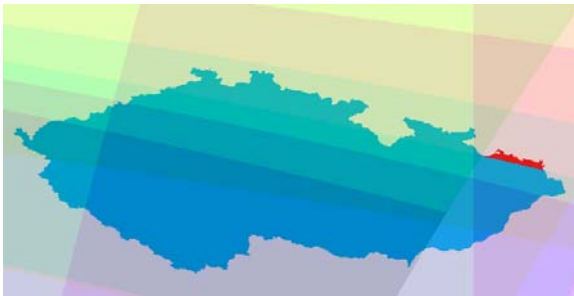
The screenshot shows the gisat software interface with a classification process. The main window displays a map with various colored segments and overlaid polygons. Several dialog boxes are open:

- Class Description:** Name: TIME WIN 1, Parent class for display: TIME WIN 1.
- Membership Function:** Feature: T1obj, Minimum value: 0, Maximum value: 1, x/y: 2,008029381e+013 / 1,100.
- Process Tree:** Shows the classification workflow, including steps like VAHA_TIME, MULTI DATE, and AOI with MULTI DATE.

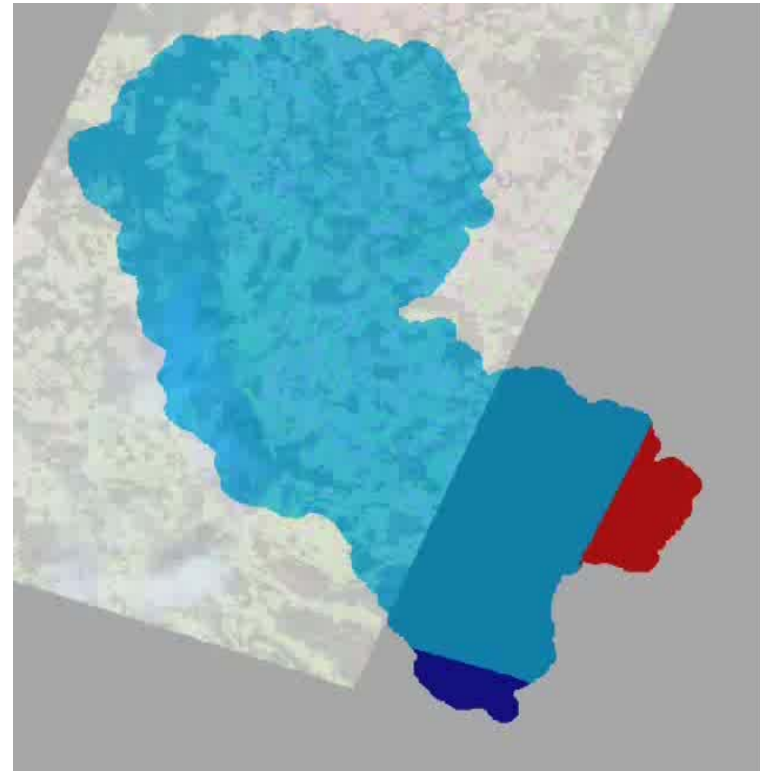
A table in the bottom left shows scene features and their values:

Feature	Value
Scene features	Variables
temp_TW_3_best	20080810094752.00
temp2_TW_3_best	20080813095337.00
TW3_low	20080812000000.00
TW3_up	20081125240000.00

- Spojování objektů do větších celků dle parametrů
 - Klasifikace dle kritérií
 - splňuje podmínky časových oken ?
 - podíl oblačnosti < max. přípustná oblačnost ?
 - atd.



Object Features	Variables	Value
FW_1_Best	FW_1_Best	200803099950.00
FW_2_Best	FW_2_Best	2008062116218.00
FW_3_Best	FW_3_Best	2008091204795.00
TS04	TS04	0.0078038
TS04_C1	TS04_C1	2008041400014.00
TS04_C2	TS04_C2	0.047779
TS04_C3	TS04_C3	0.015082
TS04_C4	TS04_C4	2008051961360.00
TS04_C5	TS04_C5	0.0091773
TS04_C6	TS04_C6	2008062109942.00
TS04_C7	TS04_C7	2008062116218.00
TS04_C8	TS04_C8	0.0074794
TS04_C9	TS04_C9	0
TS04_C10	TS04_C10	0



Export výsledku do .shp

EXPORT
MULTI DATE, overclouded, ROI_ok at L1: export object shapes to ROI_export

The screenshot displays the ArcMap interface with a map showing a geographical area divided into several colored regions. The 'Layers' panel on the left lists the data layers. The 'Attribute Table' for 'mnoh_2008_AOI' is open, showing a table with columns: FID, Shape, TW_1_best, TW_2_best, TW_3_best. The table contains 17 records of polygon data.

FID	Shape	TW_1_best	TW_2_best	TW_3_best
1	Polygon	2000031109940	2000042209942	20000414093014
2	Polygon	200000910094752	20000807091620	20000306099550
3	Polygon	200005310995300	20000720929266	20000414093014
4	Polygon	200000910094752	20000622100218	20000910094752
5	Polygon	2000031109940	20000720929266	2000031109940
6	Polygon	200000910094752	20000807091620	20000306099550
7	Polygon	200005310995300	20000720929266	20000414093014
8	Polygon	200000910094752	20000622100218	20000910094752
9	Polygon	2000031109940	20000720929266	2000031109940
10	Polygon	200000910094752	20000807091620	20000306099550
11	Polygon	200005310995300	20000720929266	20000414093014
12	Polygon	200000910094752	20000622100218	20000910094752
13	Polygon	2000031109940	20000720929266	2000031109940
14	Polygon	200000910094752	20000807091620	20000306099550
15	Polygon	200005310995300	20000720929266	20000414093014
16	Polygon	200000910094752	20000622100218	20000910094752
17

The 'Attribute Table' for 'ROI_export' is also open, showing a table with columns: FID, Shape, Date, Area, Perim, Length, and Area_2. The table contains 17 records of polygon data.

FID	Shape	Date	Area	Perim	Length	Area_2
1	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
2	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
3	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
4	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
5	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
6	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
7	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
8	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
9	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
10	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
11	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
12	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
13	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
14	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
15	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
16	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431
17	Polygon	2008-01-01	1.24431	1.24431	1.24431	1.24431