

OPK Blend



Menci Software
OPK Blend
SERVER

www.menci.com



Menci Software
OPK Blend
CLIENT

www.menci.com

OPK Blend is a tool specifically developed for orthomosaic generation, RGB and IR images color balancing and also intelligent editing and automatic seamlines generation. This package allows user to save time during the mosaicking due to low demand for user intervention and high automation of the calculation, more a way of dividing the entire dataset process among multiple clients in order to parallelize the calculations and save time.

image processing tech



www.menci.com

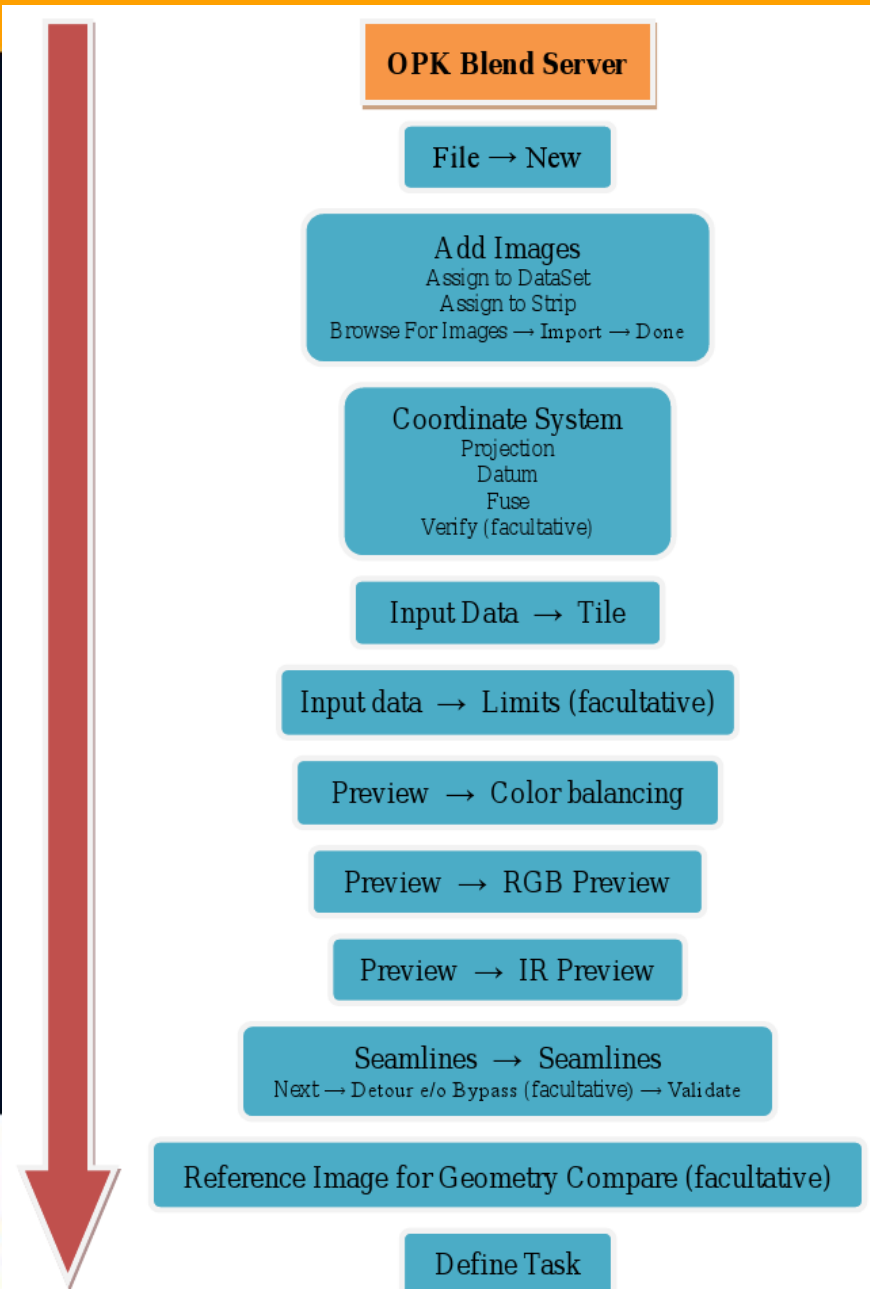
Main Features: *Blend Server*

<i>Features</i>	
Import and process orthophoto	NO limits
Coordinate system editor	<input checked="" type="checkbox"/>
Import Tile	<input checked="" type="checkbox"/>
Import Limits	<input checked="" type="checkbox"/>
Multi-channel images handling: RGB+IR	<input checked="" type="checkbox"/>
Automatic orthophoto RGB colorimetric balancing	<input checked="" type="checkbox"/>
Automatic orthophoto IR radiometric balancing	<input checked="" type="checkbox"/>
Seamlines automatic generation	<input checked="" type="checkbox"/>
Seamlines manual correction	<input checked="" type="checkbox"/>
Automatic geometry compare with previous ortho-mosaic	<input checked="" type="checkbox"/>

Features and Workflow: *Blend Server*

- No limits to import and elaboration orthophoto
- Automatic data saved
- Automatic report generation
- Single-DataSet or multi-DataSet elaboration
- Activate/Deactivate orthophoto
- Multi-channel orthophoto handling (RGB + IR)
- Coordinate projection editor
 - * Projectum
 - * Datum
 - * Fuse
- Tile importation
- Limits importation
- Orthophoto, Tile or Task visualization
- Orthophoto, Tile and Limits activate/deactivate visualization
- Custom orthophoto color balancing
 - * Color Propagation
 - * Template on Standard Reference Dataset
 - * Template on Custom Dataset
- IR radiometric balancing
- Color balancing RGB preview
- Radiometric balancing IR preview
- Automatic seamlines generation
- Advanced routing of seamlines generation
- Seamlines manual editing
 - * Point to point
 - * Detour
 - * ByPass
- Automatic generation of "Map of deviation"
- Multi Task definition process
- Log visualization
- Shortcut and/or command line input
- Activate/Deactivate Tile
- Orthophoto viewer
- Custom define Task to process
 - * All
 - * Selection

image processing tech



Main Interface



Create new project: importing images 1/3



Add Images - www.menci.com

Assign to DataSet
 DataSet1

Assign to Strip
 From file name with separator: -

Images to add:

Image Name

Imported Images:

Image Name

+ Browse For Images... → Import

Done Abort

Log CAD Commands

coords...	CAP	NUM	SCRL
-----------	-----	-----	------

	CAP	NUM	SCRL
--	-----	-----	------



Create new project: importing images 2/3

OPKBlend Server ver. 1.1.0.0 - Menci Software - www.menci.com

File View Help

Add Images - www.menci.com

Assign to DataSet:
DataSet1

Assign to Strip:
From file name with separator: _

Images to add:

Image Name
95_5795
95_5796
95_5797
95_5798
95_5799
95_5800
95_5801
95_5802
95_5803
95_5810
95_5811

Imported Images:

Image Name

+ Browse For Images... → Import

Done Abort

Output Window

Log CAD Commands

coords...

CAP NUM SCRL

Create new project: importing images 3/3

OPKBlend Server ver. 1.1.0.0 - Menci Software - www.menci.com

File View Help

Add Images - www.menci.com

Assign to DataSet:
DataSet1

Assign to Strip:
From file name with separator: _

Images to add: Imported Images:

Image Name	Image Name
	108_6290
	106_6129
	106_6118
	106_6107
	106_6090
	105_5974
	105_5963
	105_5952
	105_5941
	105_5930
	102_5762

+ Browse For Images... → Import

...conversion done
399 images to convert: please wait a moment..
added image: 100_6224
added image: 100_6225
added image: 100_6226
added image: 100_6227

✓ Done ✗ Abort

Output Window

Log CAD Commands

coords...

CAP NUM SCRL

Coordinate System selection

OPKBlend Server ver. 1.1.0.0 - Menci Software - www.menci.com

File View Help

Coordinate System - www.menci.com

Projection:	<input type="text"/>	Datum:	<input type="text"/>
Units:	<input type="text" value="Meters"/>	Fuse:	<input type="text"/>

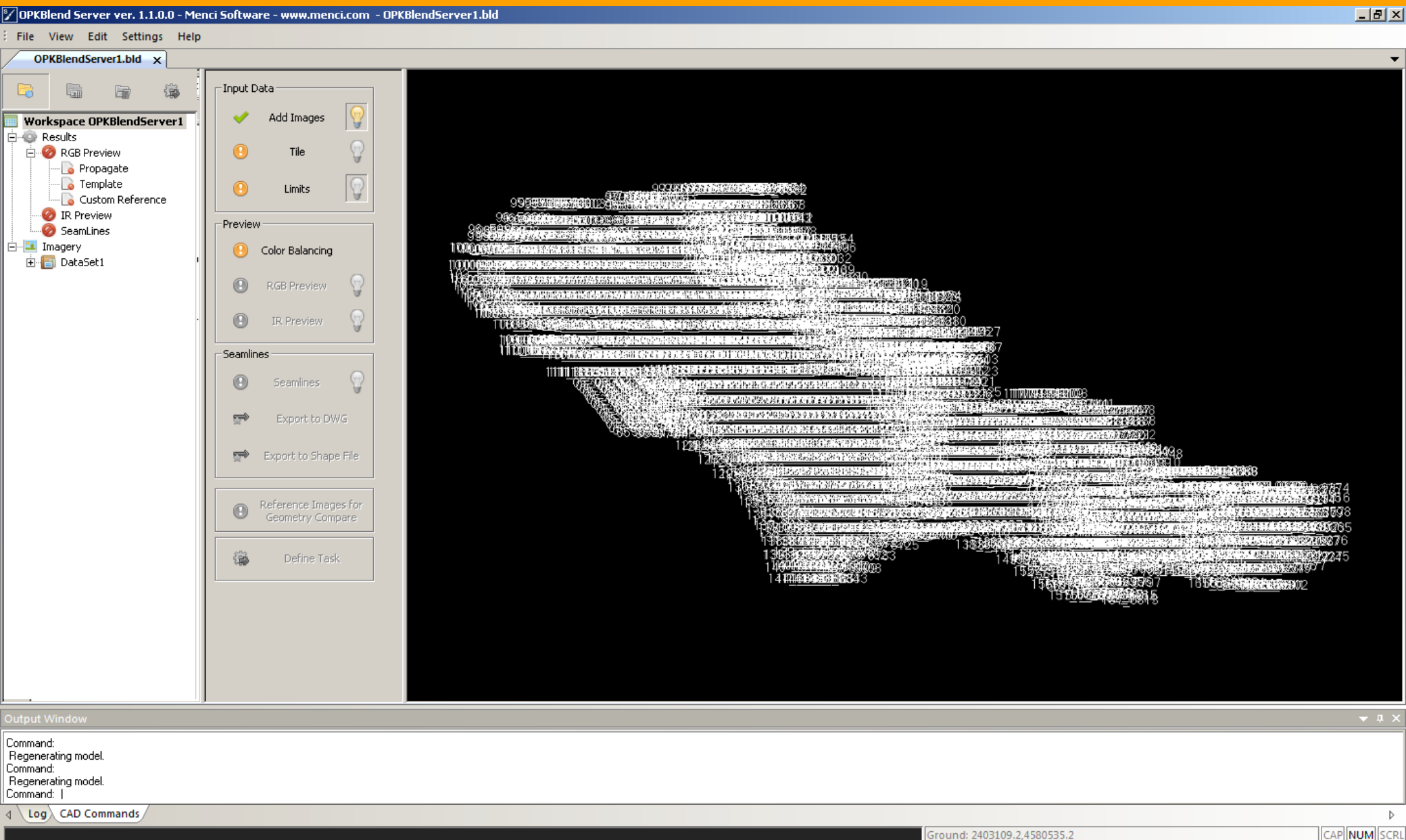
Output Window

Log CAD Commands

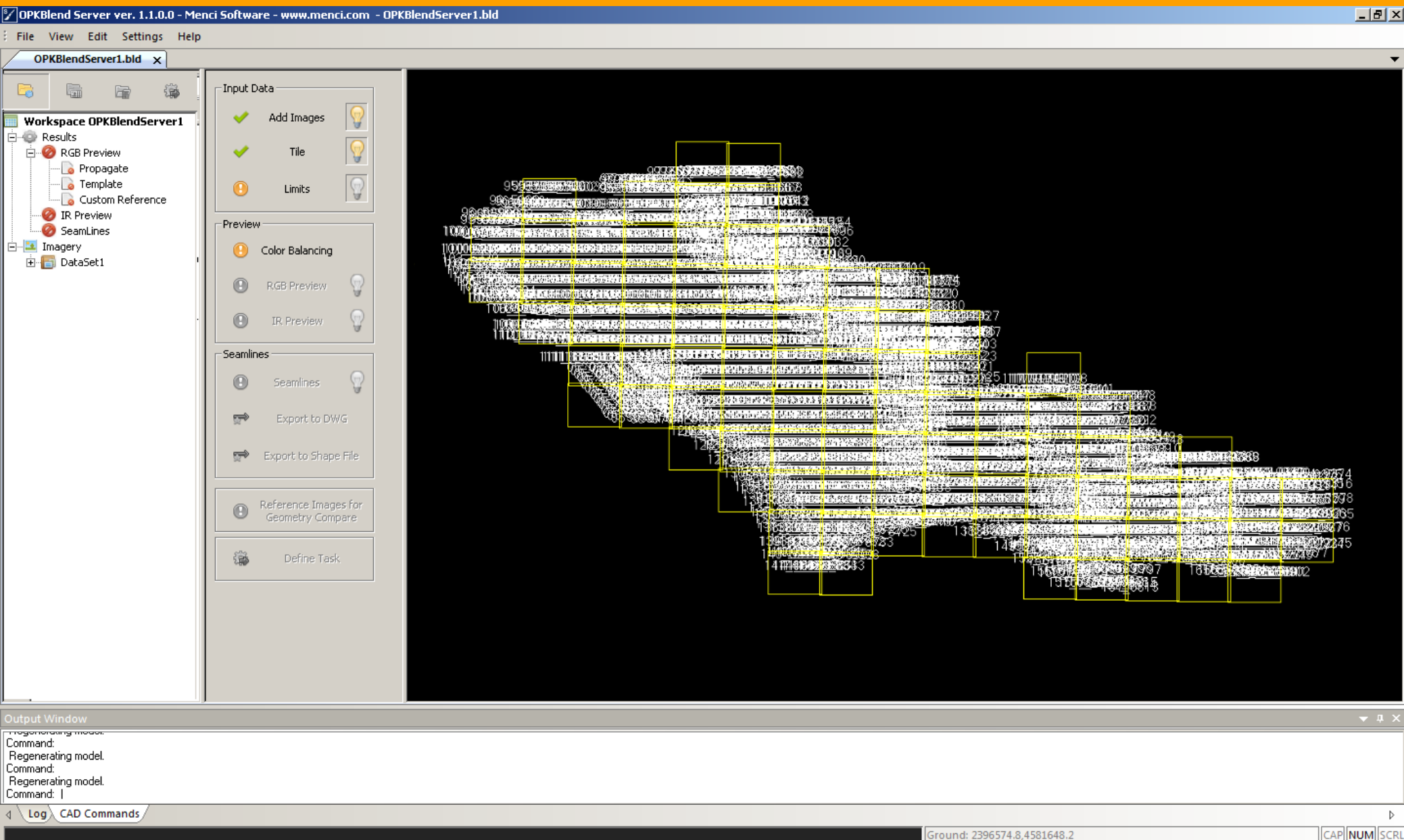
coords...

CAP NUM SCRL

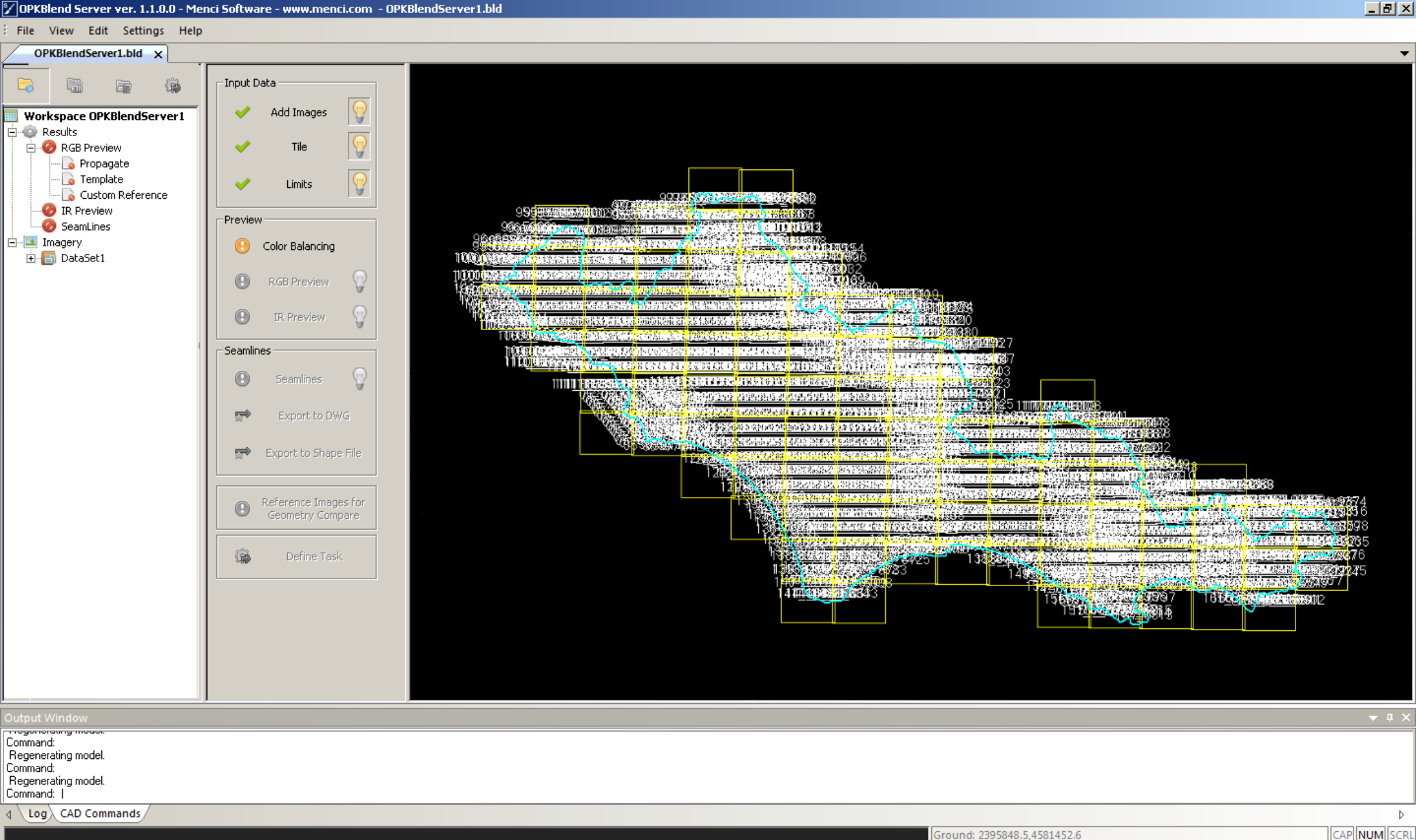
Images importation



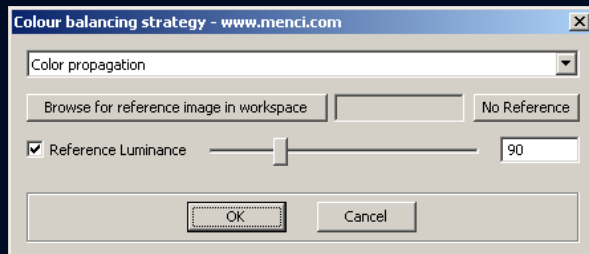
Tile importation



Limits importation

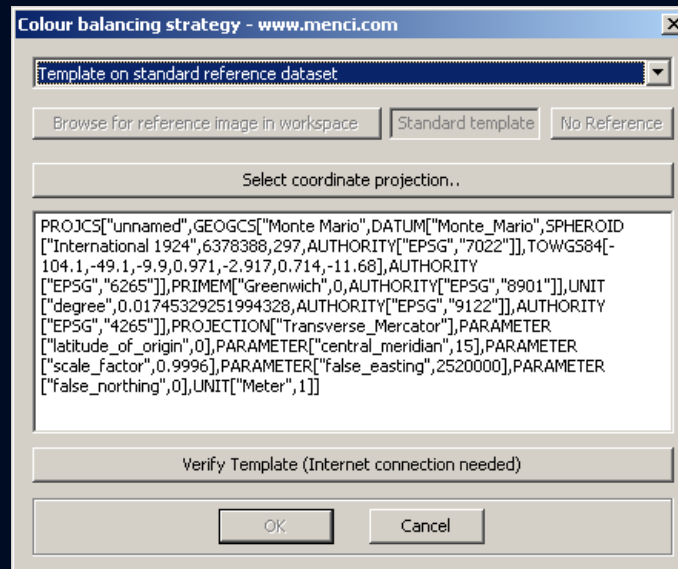


Color balancing strategy



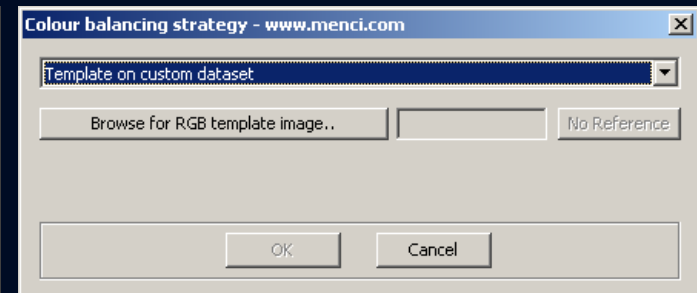
Color propagation:

using this option user can select a brightness level which make the color balance, or select a reference image among those in "Dataset" and make the color balance of the latter. Also for the latter option is possible to vary the brightness.



Template on standard reference dataset:

with this algorithm user can select a "standard template" under which the software carries out the color balance. This option requires an Internet connection to confirm the accuracy of the coordinates chosen.



Template on custom dataset:

using this template user can select an image (of the same geographical area) of which consider optimum color balance, software will then perform the color balancing based on this image.

RGB color balancing preview

OPKBlend Server ver. 1.1.0.0 - Menci Software - www.menci.com - OPKBlendServer1.bld

File View Edit Settings Help

OPKBlendServer1.bld

Workspace OPKBlendServer1

- Results
 - RGB Preview
 - Propagate
 - Template
 - Custom Reference
 - IR Preview
 - SeamLines
- Imagery
 - DataSet1

Input Data

- ✓ Add Images
- ✓ Tile
- ✓ Limits

Preview

- ✓ Color Balancing
- ✓ RGB Preview
- ! IR Preview

Seamlines

- ! Seamlines
- Export to DWG
- Export to Shape File

Reference Images for Geometry Compare

Define Task

Output Window

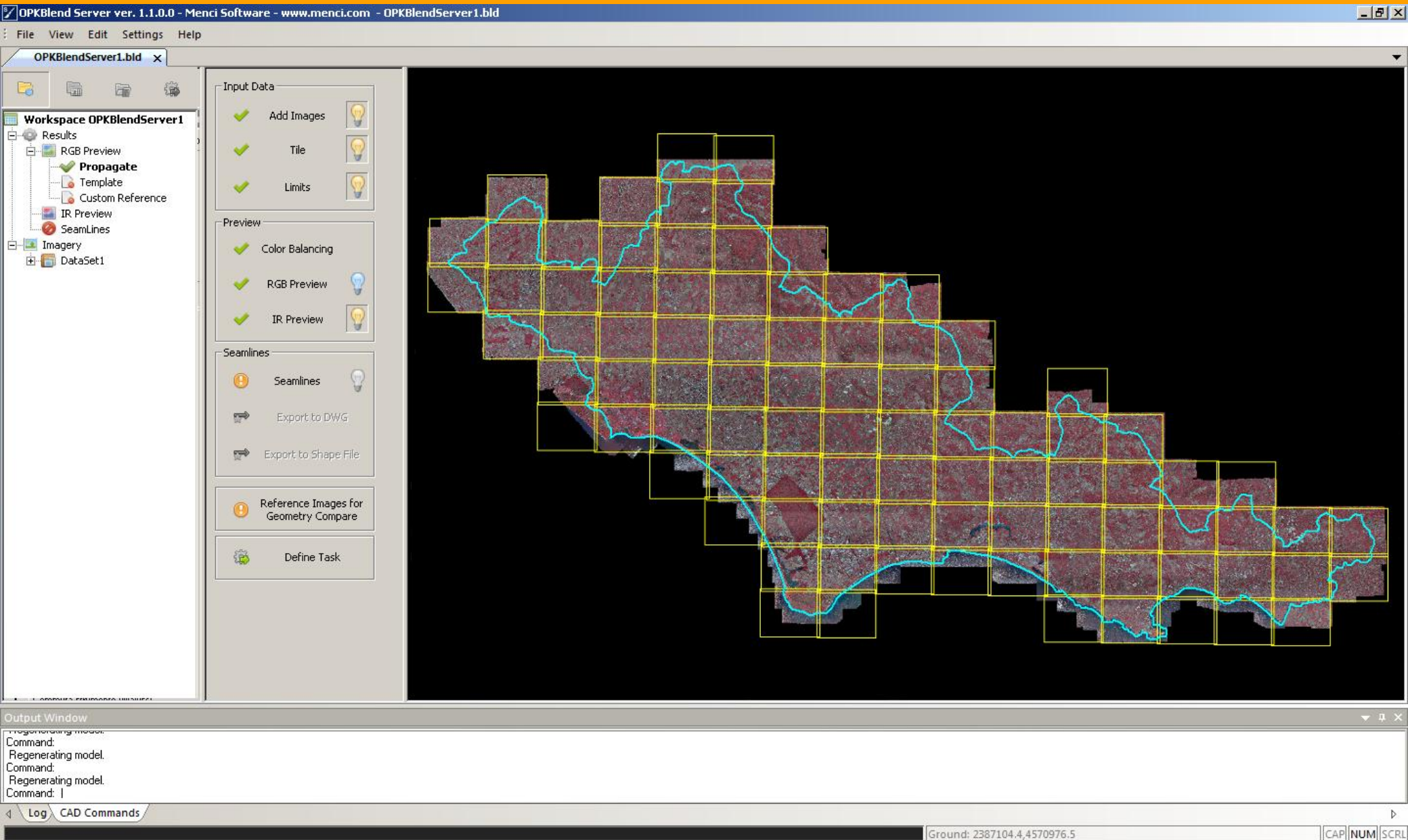
Regenerating model.
Command:
Regenerating model.
Command:
Regenerating model.
Command: |

Log CAD Commands

Ground: 2395010.4,4581759.9

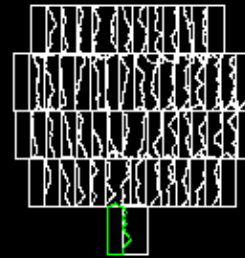
CAP NUM SCRL

IR radiometric balancing preview



Automatic Seamlines generation

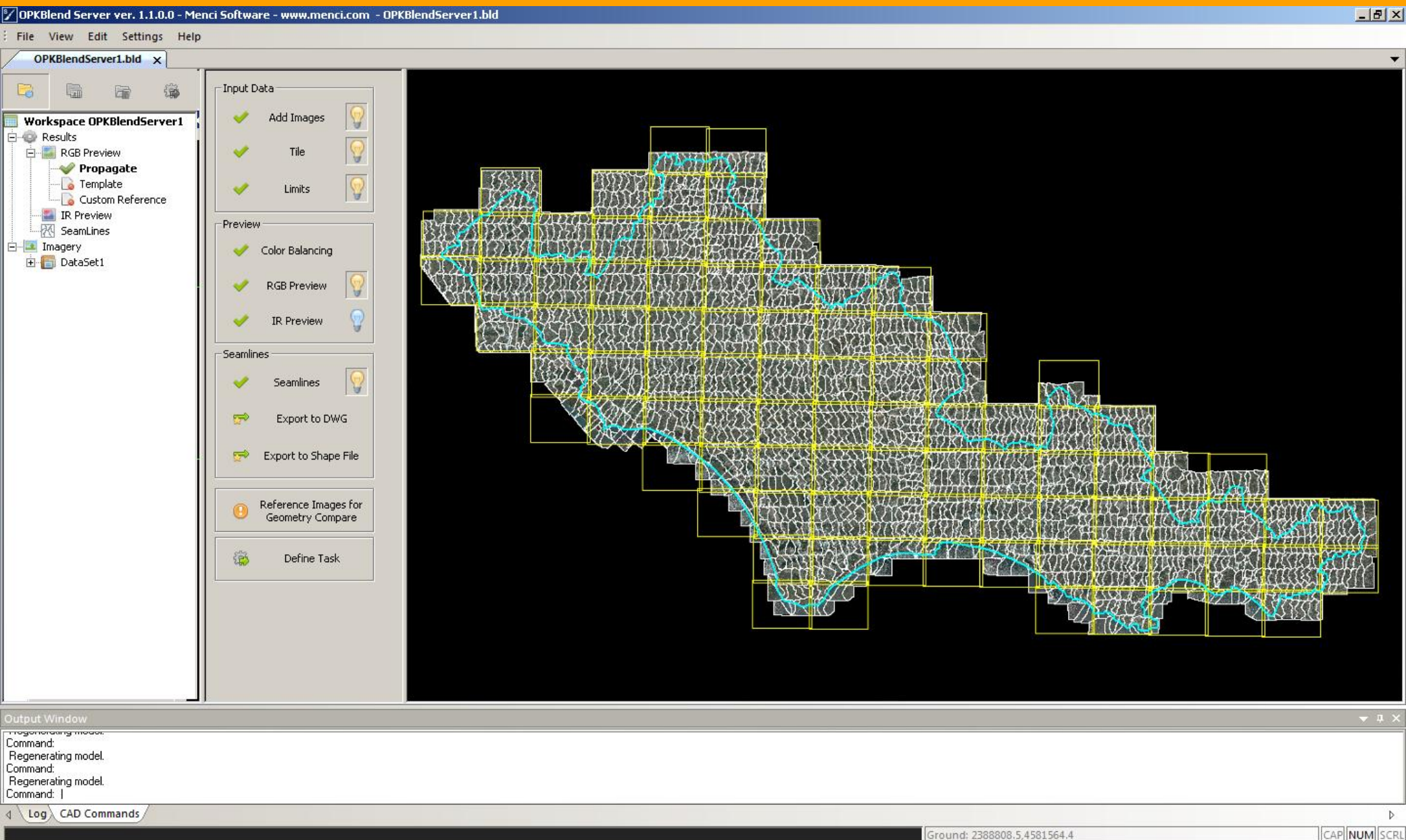
Building SeamLines..



135 minutes, 2 seconds remaining

Abort

Seamlines generation: result



Task definition

Task [X]

Tiles

Available Tiles:

Tile Name
387120e
387150e
387160e
388070e
388080e
388100e
388110e
388120e
388130e
388140e
388150e
388160e
389130e
399030e
399040e
399080e
400010e
400020e
400030e
400040e

Add ->

Remove <-

Remove All <-

Select by map...

Selected Tiles:

Tile Name

Task Name: ☐ Geometry compare Step: d.u.

Define Task Cancel

Task [X]

Tiles

Available Tiles:

Tile Name

Add ->

Remove <-

Remove All <-

Select by map...

Selected Tiles:

Tile Name
387120e
387150e
387160e
388070e
388080e
388100e
388110e
388120e
388130e
388140e
388150e
388160e
389130e
399030e
399040e
399080e
400010e
400020e
400030e
400040e

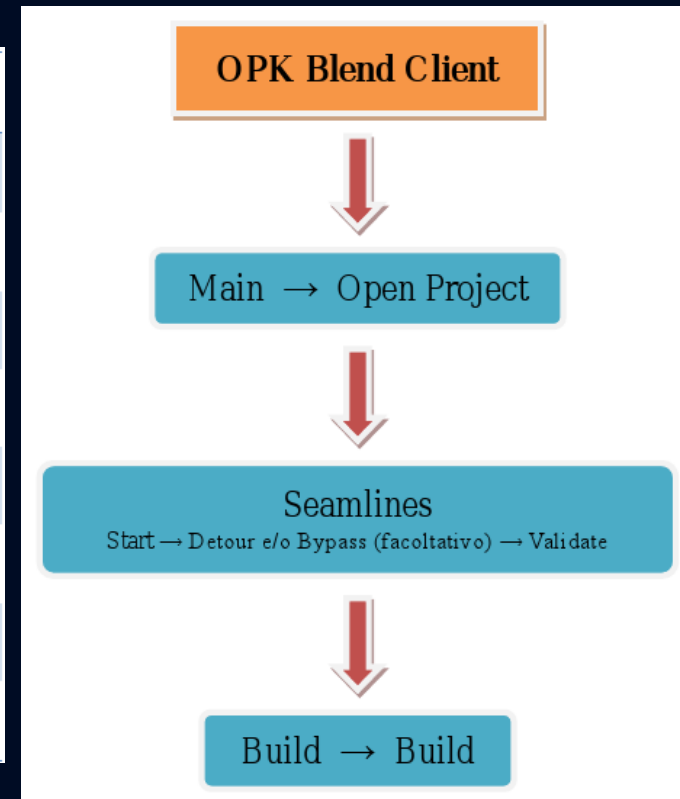
Task Name: ☐ Geometry compare Step: d.u.

Define Task Cancel

Main Features: *Blend Client*

Caratteristiche Principali

Import and process orthophoto	No limits
LAN network split process elaboration	✓
Dinamic update seamlines editing status	✓
Seamlines graphic editor	✓
Multiple seamlines editor strategy	✓
Customizing display settings	✓
Activate/Deactivate Tile	✓
Report	✓



Main interface: open project (Task)

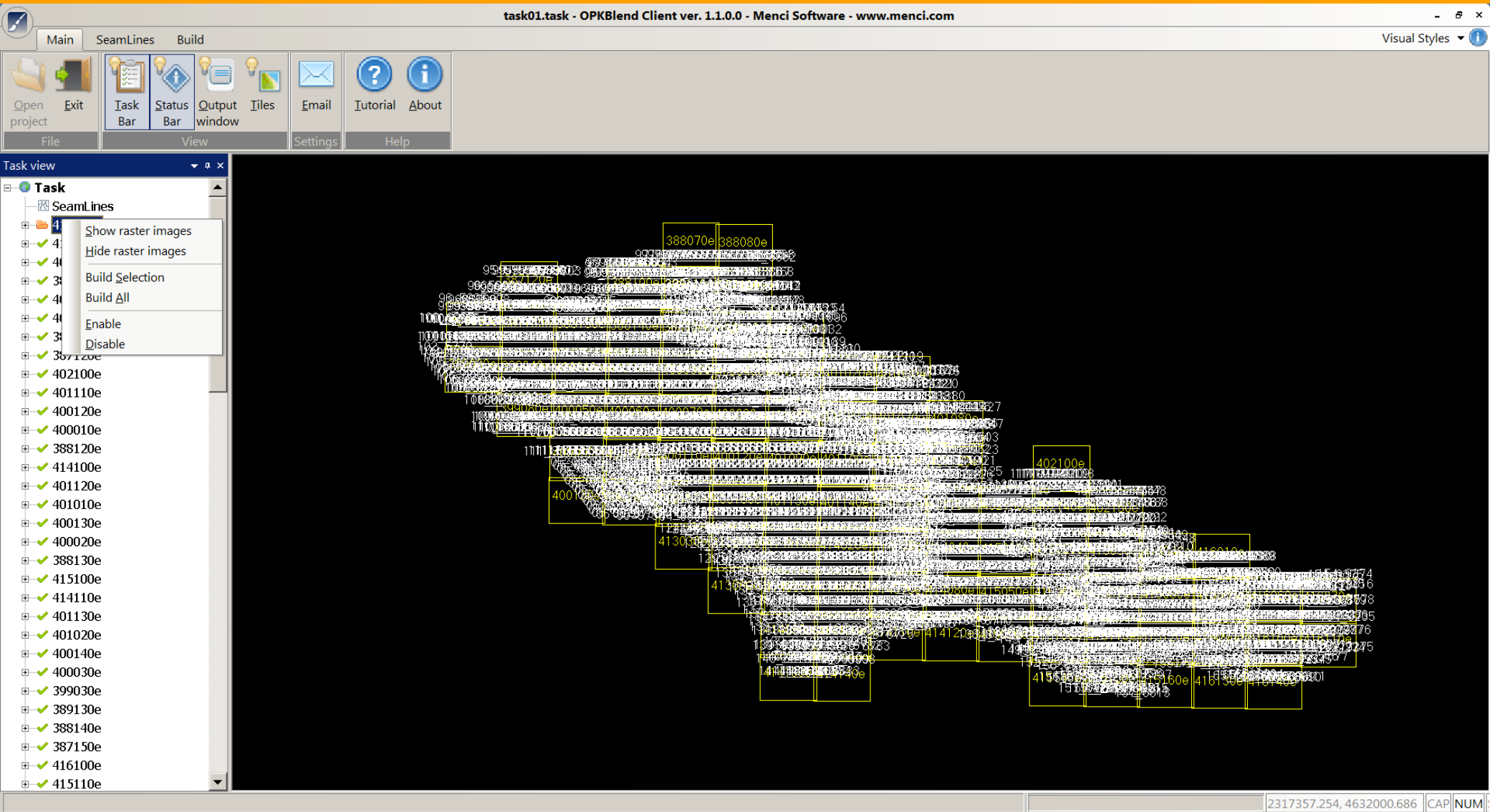


image processing tech



www.menci.com

Seamlines editing: Detour option

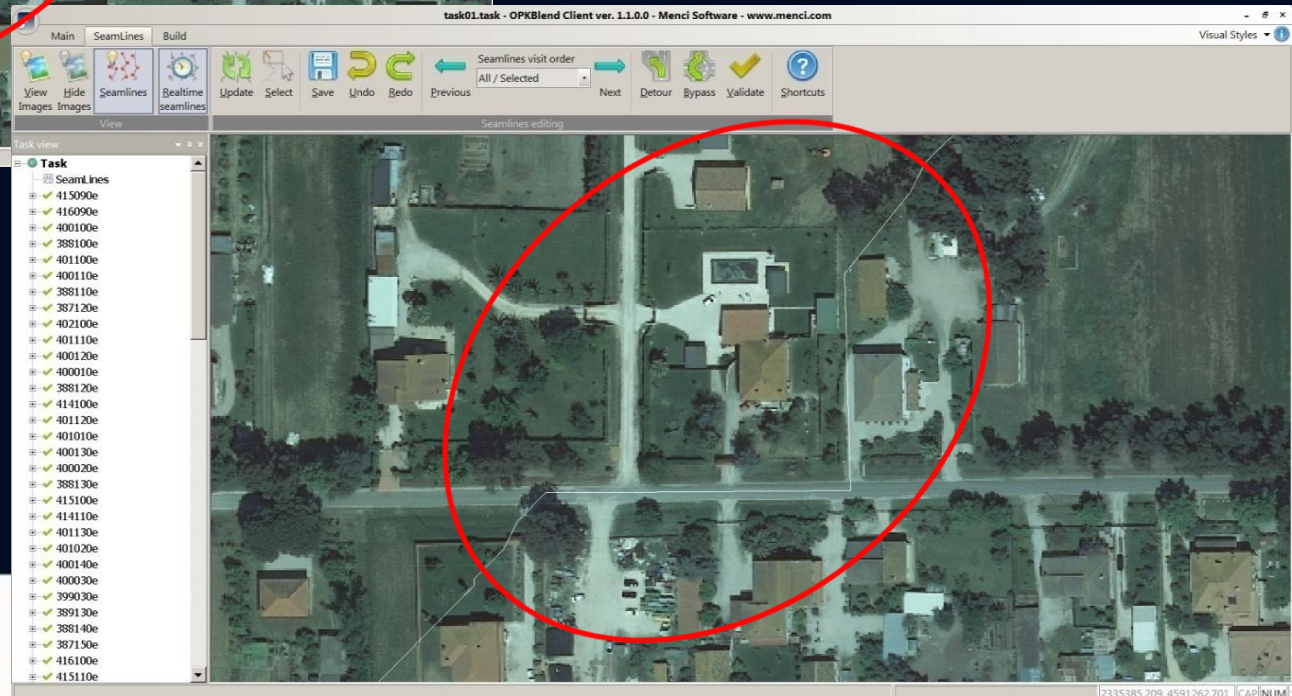
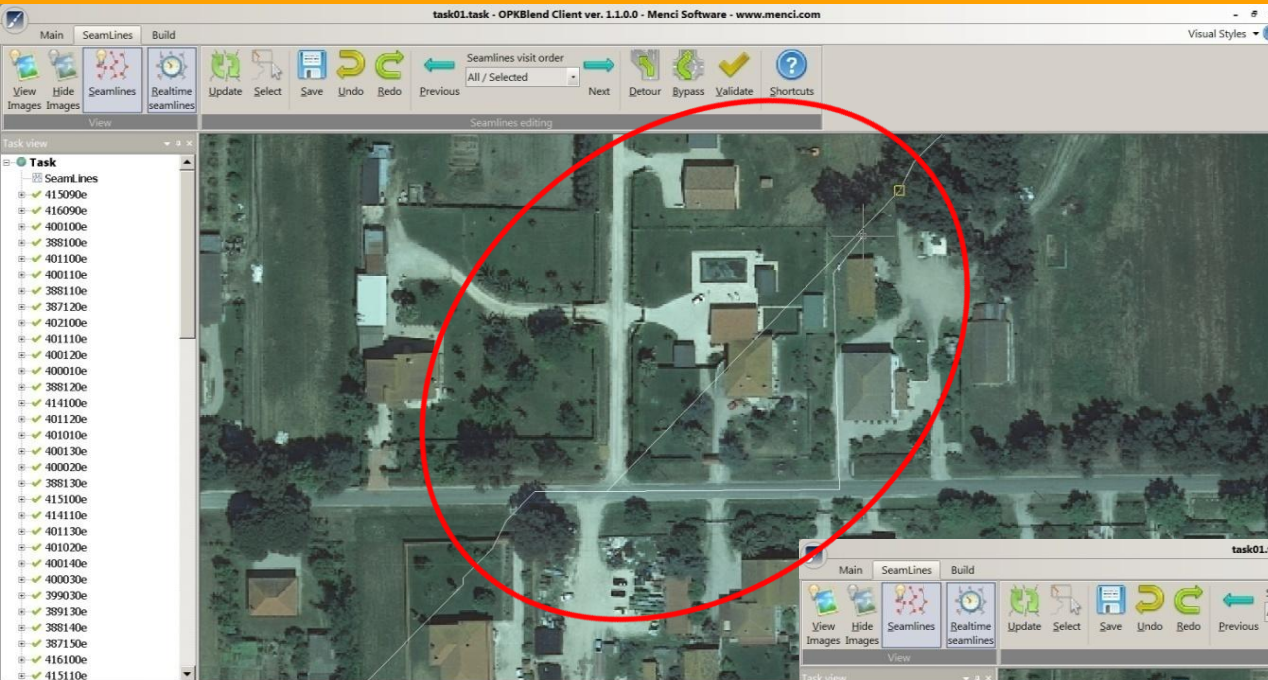


image processing tech



www.opkblend.com

2335385.209 4591262.701 CAP NUM

Seamlines editing: Bypass option

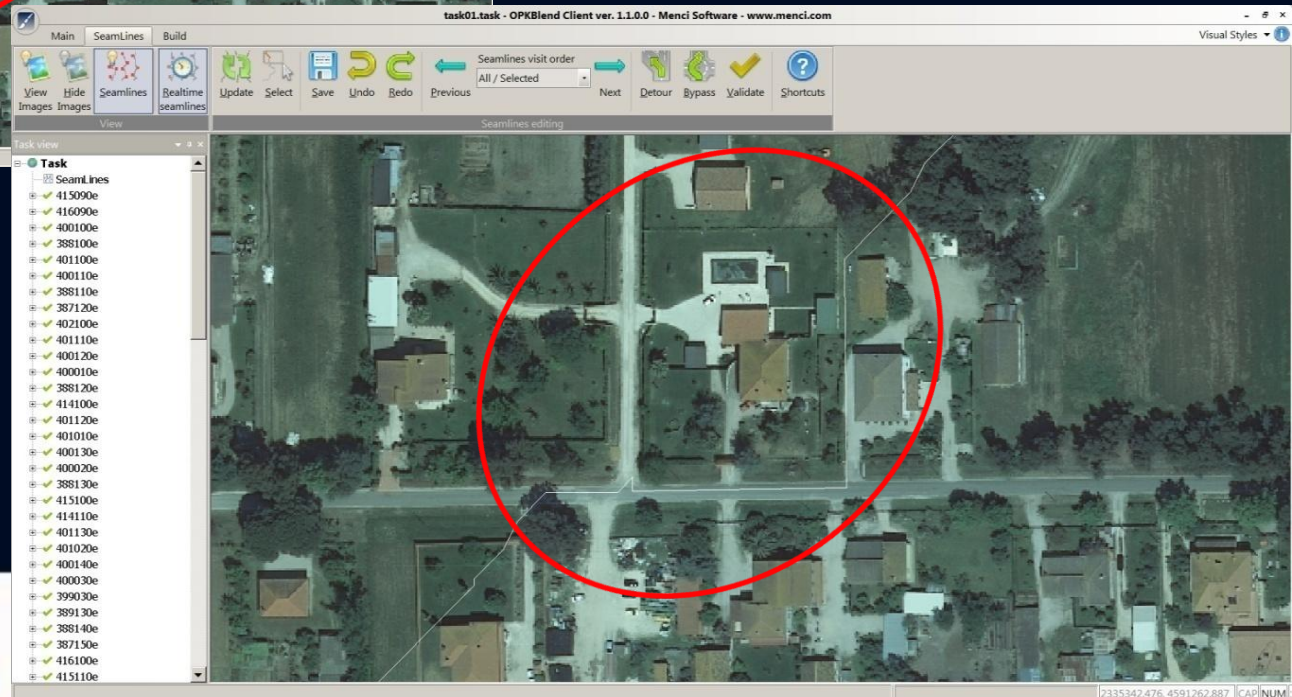
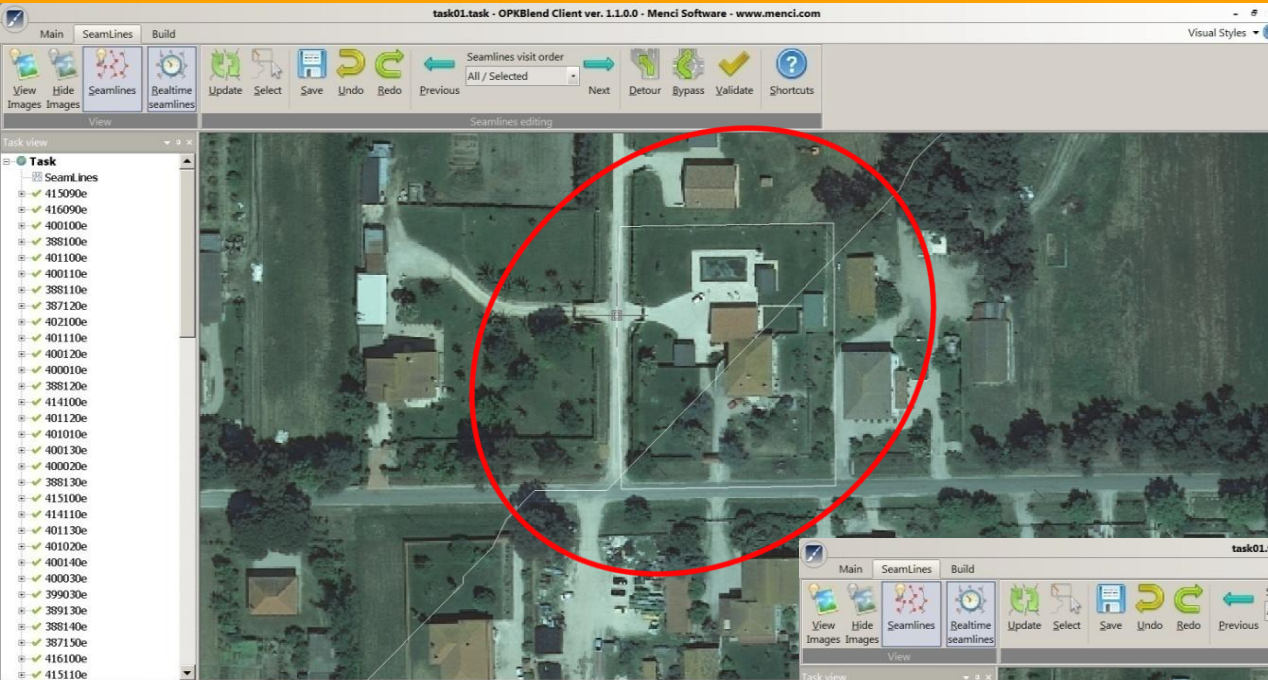


image processing tech



Orthomosaic generation: 1/3

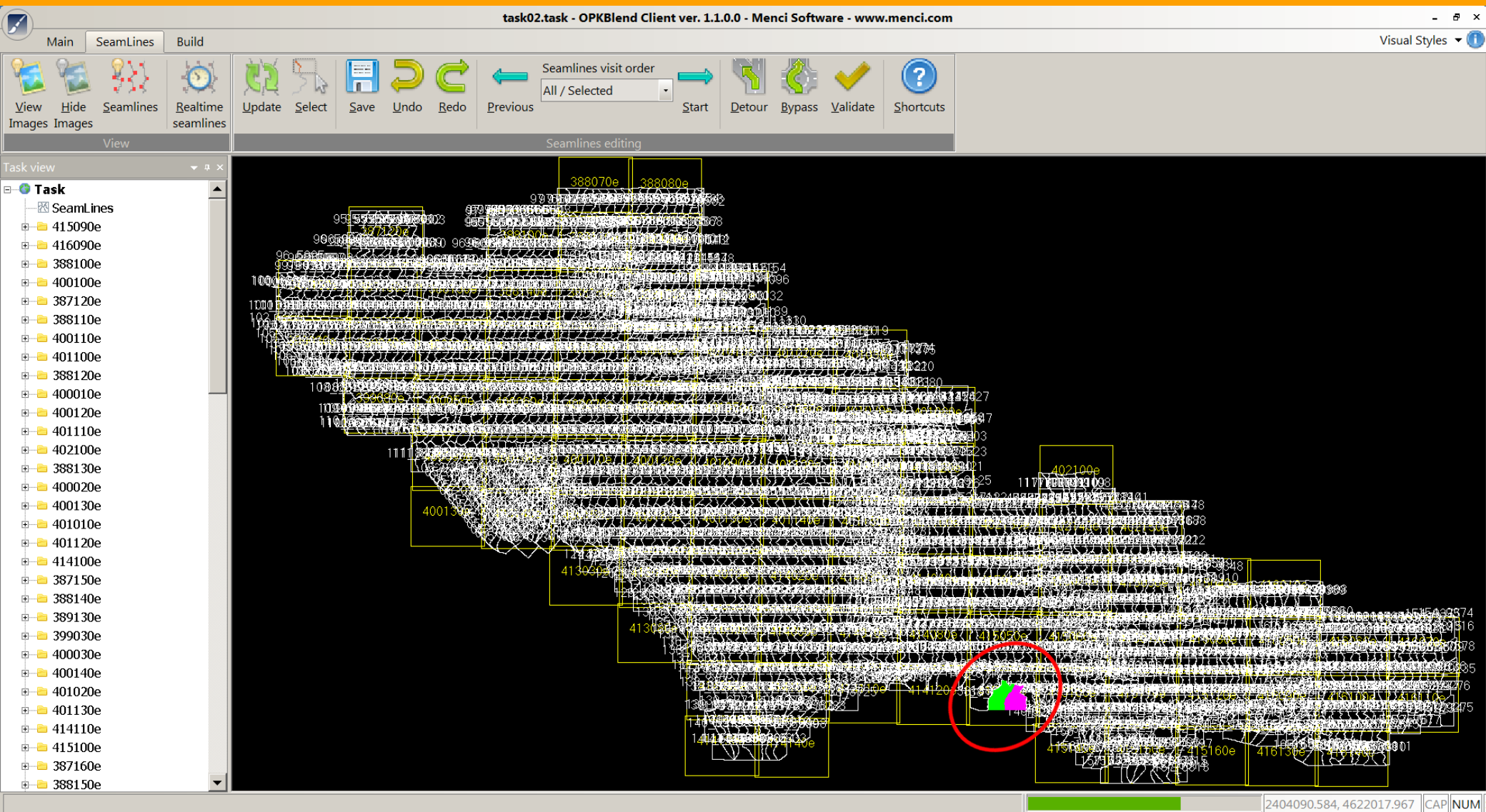


image processing tech



www.menci.com

Orthomosaic generation: 2/3

task02.task - OPKBlend Client ver. 1.1.0.0 - Menci Software - www.menci.com

Main SeamLines Build Visual Styles

View Images Hide Images SeamLines Realtime seamlines

Update Select Save Undo Redo Previous Start Detour Bypass Validate Shortcuts

Seamlines editing

Task view

- Task
- SeamLines
- 415090e
- 416090e
- 388100e
- 400100e
- 387120e
- 388110e
- 400110e
- 401100e
- 388120e
- 400010e
- 400120e
- 401110e
- 402100e
- 388130e
- 400020e
- 400130e
- 401010e
- 401120e
- 414100e
- 387150e
- 388140e
- 389130e
- 399030e
- 400030e
- 400140e
- 401020e
- 401130e
- 414110e
- 415100e
- 387160e
- 388150e

Orthomosaic generation progress: 2/3

2385838.952, 4567533.025 CAP NUM

image processing tech



www.menci.com

Orthomosaic generation: 3/3

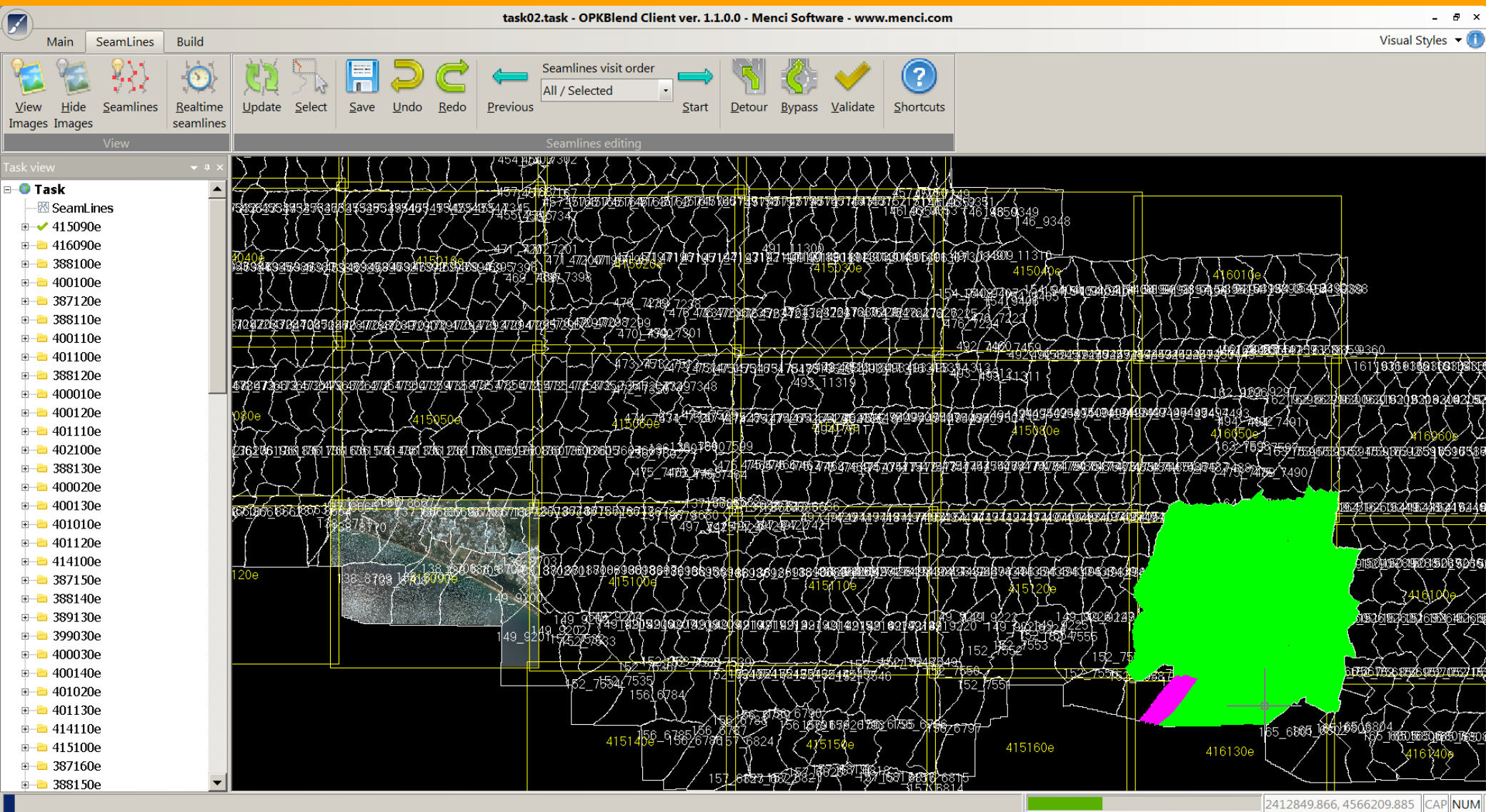


image processing tech



www.menci.com

Orthomosaic generation: reult 1/2

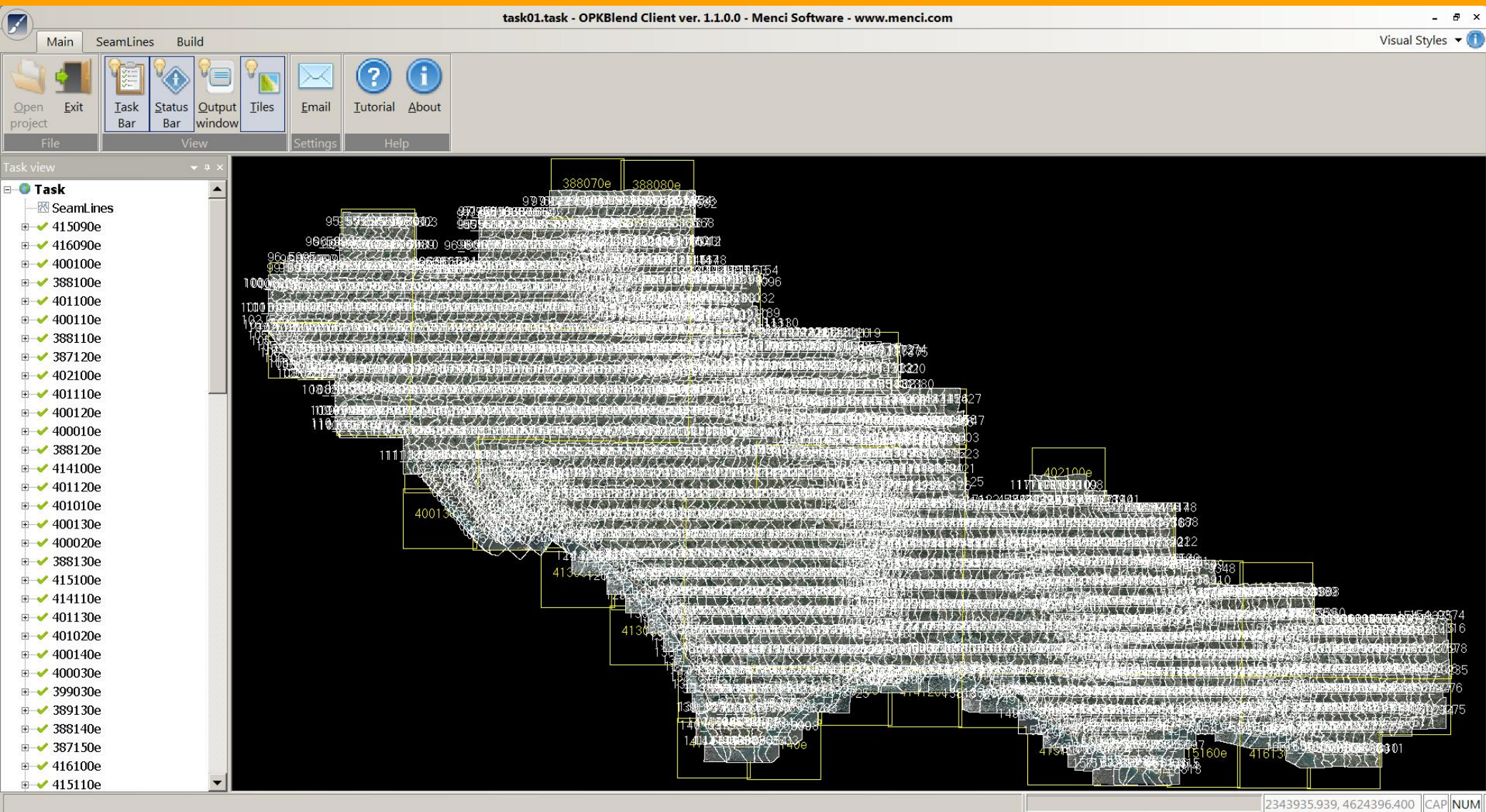


image processing tech



www.menci.com

Orthomosaic generation: reult 2/2

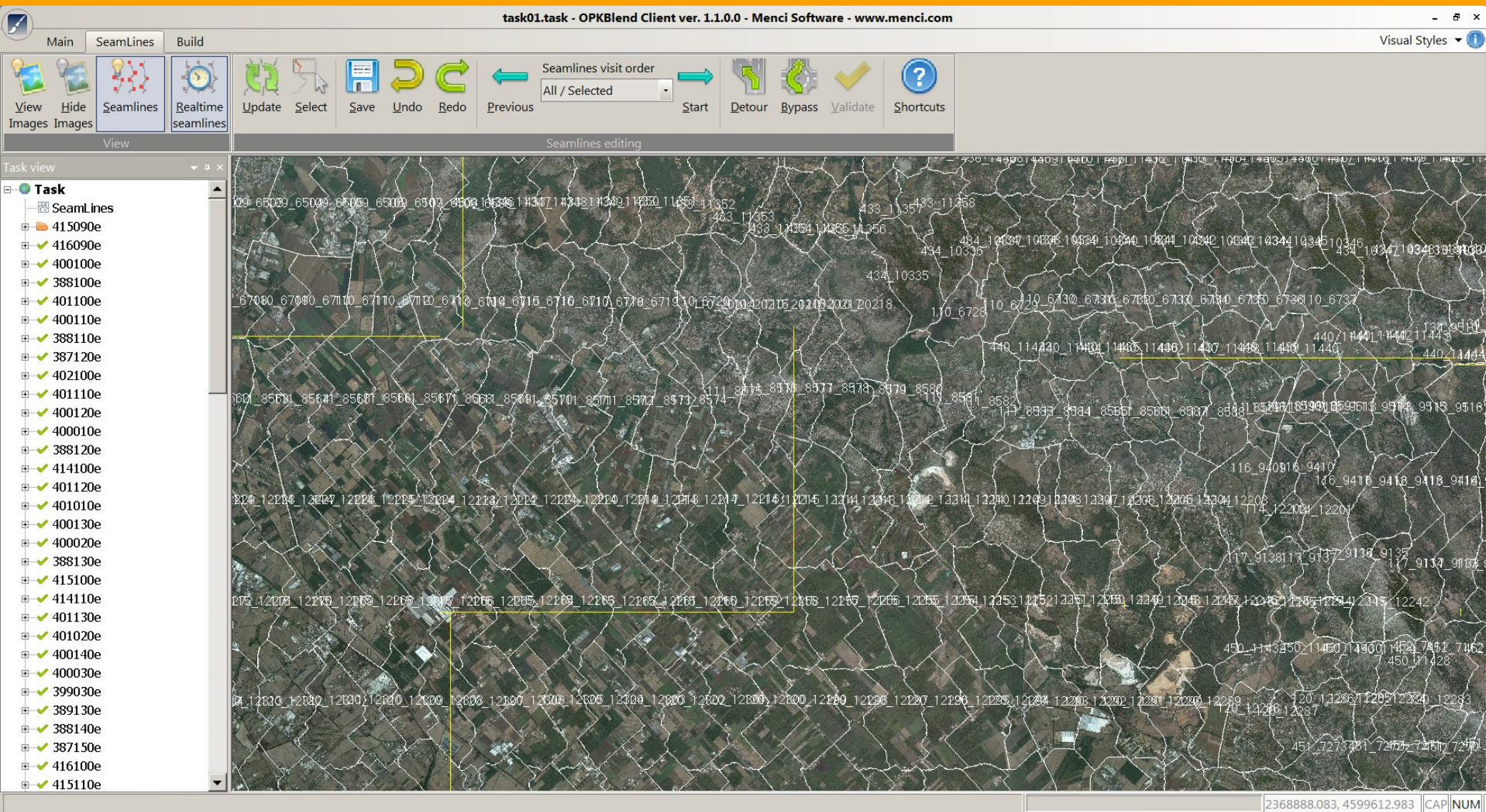
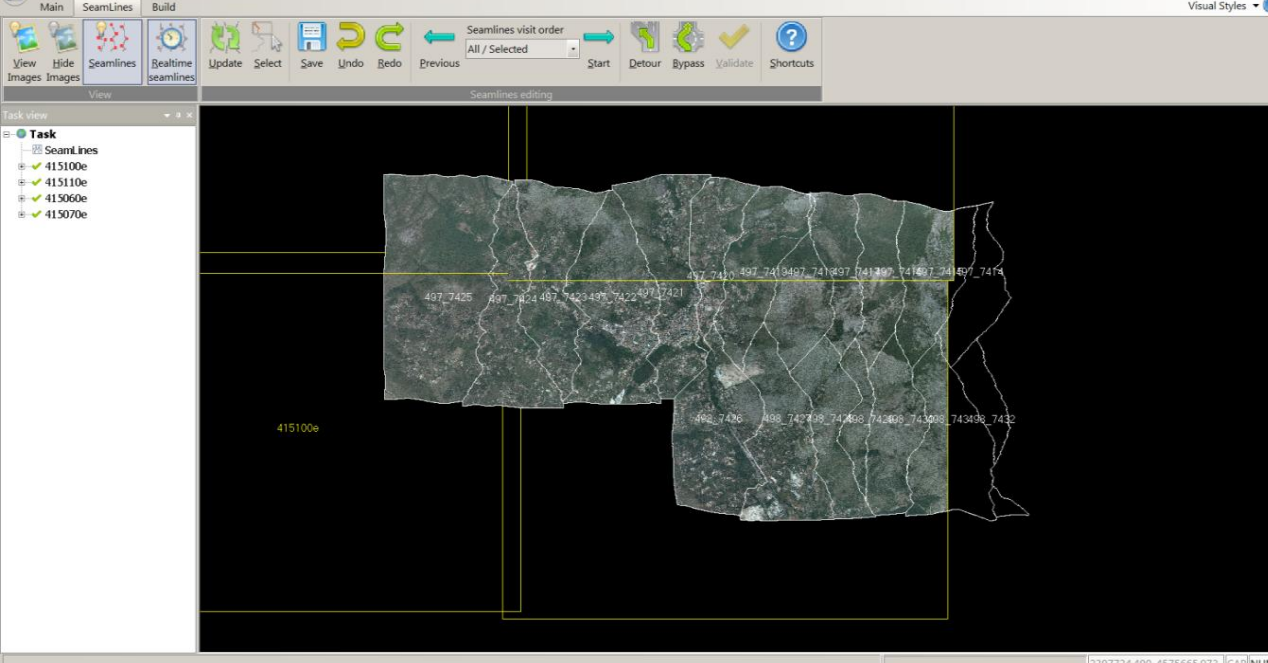


image processing tech

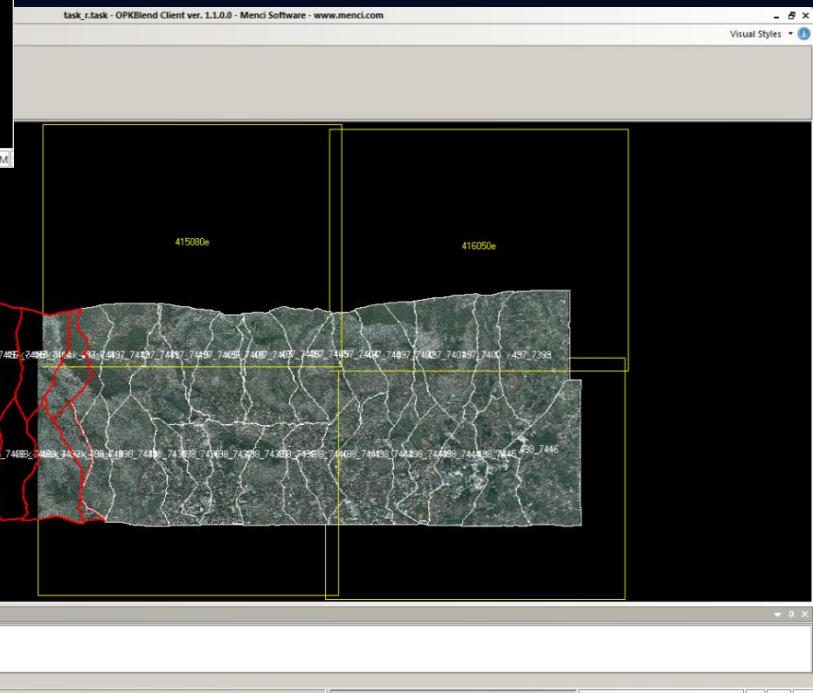


www.menci.com

LAN network project management



OPK Blend can handle the seamlines editing and Tile processing among multiple users in local network.



In the images we refer for simplicity to a project whose production has been divided into only two distinct Task: **Task-r** and **Task-l** are assigned to two different PCs. The division, however, can be made with any number of PCs.

image processing tech

