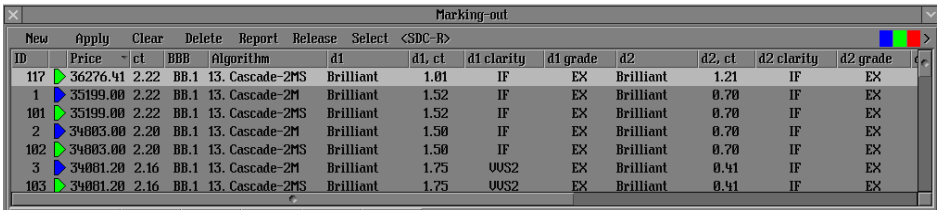
Helium Rough / Pacor Client 7.7.1-hotfix 1

Improvements

Algorithm 13. Cascade-2MS

The Solutions with similar weight of diamonds (symmetrical solutions) sometimes have the highest cost. In some cases, Algorithm 13. Cascade-2MS finds such solutions. This happens quite rarely, in about 1-2% of cases, and the price for this is an increase in the operating time of the algorithm by 1.4 times. The list of solutions usually consists of all solutions of Algorithm 13. Cascade-2M plus additionally symmetric solutions.

The below example shows solutions of both algorithms 13. Cascade-2M (blue) and 13. Cascade-2MS (green).



ID	Price	ct	BBB	Algorithm	d1	d1, ct	d1 clarity	d1 grade	d2	d2, ct	d2 clarity	d2 grade
117	36276.41	2.22	BB.1	13. Cascade-2MS	Brilliant	1.01	IF	EX	Brilliant	1.21	IF	EX
1	35199.00	2.22	BB.1	13. Cascade-2M	Brilliant	1.52	IF	EX	Brilliant	0.70	IF	EX
101	35199.00	2.22	BB.1	13. Cascade-2MS	Brilliant	1.52	IF	EX	Brilliant	0.70	IF	EX
2	34803.00	2.20	BB.1	13. Cascade-2M	Brilliant	1.50	IF	EX	Brilliant	0.70	IF	EX
102	34803.00	2.20	BB.1	13. Cascade-2MS	Brilliant	1.50	IF	EX	Brilliant	0.70	IF	EX
3	34081.20	2.16	BB.1	13. Cascade-2M	Brilliant	1.75	VVS2	EX	Brilliant	0.41	IF	EX
103	34081.20	2.16	BB.1	13. Cascade-2MS	Brilliant	1.75	VVS2	EX	Brilliant	0.41	IF	EX

The best solution of 13. Cascade-2M algorithms is a solution with a weight of 1.52+0.70ct. In addition to this, Algorithm 13. Cascade-2MS found 1.01+1.21ct.

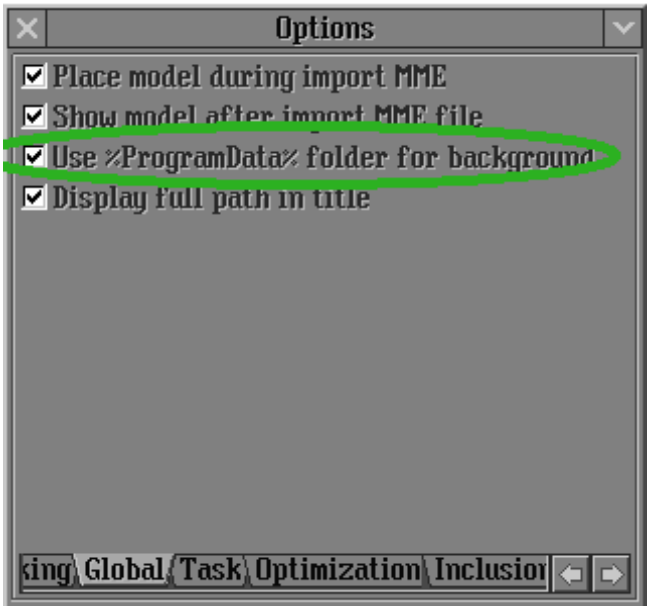
61mm field of view supported

Helium Rough program with special equipment works now on field of view up to 61mm. On stones weighing up to 20 carats, the scanning speed reaches 100 fps. For large stones weighing 100-400 carats, the speed is reduced to 15fps.

Ximea camera supported

The standard distribution package contains the files necessary to support the operation of the Ximea camera. Dll files are located in the program directory. Hws.xml file should be located in the same folder as HeliumDrivers.ini file.

For the correct program operations and ease of updating versions, the hardware settings files must be located in the ProgramData directory. Flag "Use %ProgramData% folder for background" must be enabled.



HeliumDrivers.ini and Hws.xml files should be located in %ProgramData%\Octonus Software\HeliumRough folder. _Zoom3.bmp in folder %ProgramData%\Octonus Software\HeliumRough\System.

Price list adaptation for Melee diamonds

Changed the procedure for determining the price of diamonds weighing less than 0.0584ct (Sieve up to +9).

PPC - tables of Price per Carat depending on weight, as well as color, clarity and other discounts.

Mass2 - the weight of the diamond rounded to the boundary X,XX85

Mass4 - the weight of the diamond rounded to the X.XXXX5 boundary (usual math rules for 4 digits)

Previously

- the cost for all diamonds was determined as Mass2*PPC(Mass2)

Now

- the cost of diamonds weighing 0.0585ct and above remained the same according to the formula Mass2*PPC(Mass2)
- the cost of diamonds weighing 0.0585ct and below is determined by the new formula Mass4*PPC(Mass2)

Examples of pricing for Brilliant-D-IF without additional discounts

Weight	Mass2	PPC	Old Price	New Mass	New Price
0.001	0.00	660	0.00	0.001	0.66
0.005	0.00	660	0.00	0.005	3.30
0.009	0.01	660	6.60	0.009	5.94
0.015	0.01	660	6.60	0.015	9.90
0.038	0.03	660	19.80	0.038	25.08
0.049	0.05	750	37.50	0.049	36.75
0.057	0.05	750	37.50	0.057	42.75
0.065	0.06	750	45.00	0.06	45.00

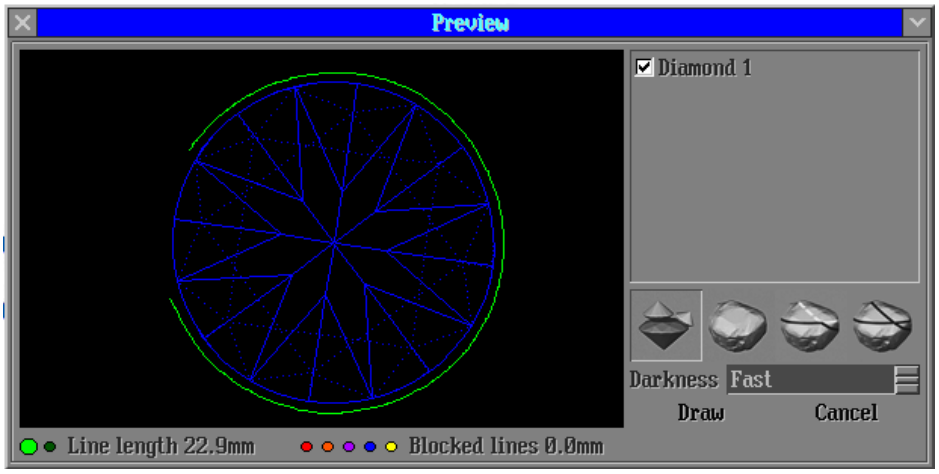
This made it possible to launch global optimization algorithms for low-weight rough diamonds.

Safety margin for Girdle form in laser marking

For Girdle form laser marking lines can be shofted from the future diamond. Parameter Offset works for Pavilion and Crown forms.



On preview picture below lines for Girdle form (pavilion) shifted on 200 microns.


Preview
Diamond 1
Darkness
Fast
Draw
Cancel
Line length 22.9mm
Blocked lines 0.0mm