

2023-01-19 - HP Carbon 1.7.6

Here you can find information about what is new in HP Carbon version 1.7.6.

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Smart Cuts. SmartRecut for generic parametric cuts

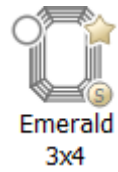
Many users apply the generic parametric cuts for diamond allocation. These cuts have an extensive number of parameters and may provide with high-yield solutions. Asymmetric allocation algorithm 'SmartRecut' could provide with even higher yields to solutions based on the generic parametric cuts. Since current version users can run the SmartRecut algorithm for a solution based on most popular Octonus generic parametric cuts. set of cuts will expand over time. Let's call them "Smart Cuts".

There is a video about Smart Cuts: what is it, why is it useful to work with Smart Cuts, how to operate in software with Smart Cuts to get high yield solutions by Smart Recut.

Video SmartRecut for generic parametric cuts				
Published:	2022, December 15	Last Updated:	2021, December 23	v.4.2
Your browser does not support the HTML5 video element				
Video summary: <ul style="list-style-type: none">Generic parametric cuts may produce high-yield solutions.Since current version SmartRecut runs for solutions based on most popular Octonus generic parametric cuts (Smart Cuts). Thereby you get even higher yields.Smart Cut has its linked appraiser. Operator specify factory cut standards in the unified SmartCut appraiser just once. And get control over the necessary parameters limits at all stages of solutions allocation and appraising.Smart Cuts are located in Cutbook "Generic Cuts". Smart Cuts are highlighted by badge "S"Sweetline is available for generic parametric cuts. Sweetline allows you to find solutions with better Optical Performance.				
Video keywords: Smart Cuts, DLL cuts, generic parametric cuts, SmartRecut				
Data	Video_SmartCuts_Princess3S_.ox2z			
	Cutwise project with solutions of Smart Cut (Sweetline ON)			
	Cutwise project with solutions of Smart Cut (Sweetline OFF)			
Published in:	Release Notes	2023-01-19 - HP Carbon 1.7.6		
	Documentation	NA		
	Playlists	NA		
	Also	As Separate Page On YouTube Specification		

Many users apply the generic parametric cuts for diamond allocation. These cuts have an extensive number of parameters and may provide with high-yield solutions. Asymmetric allocation algorithm 'SmartRecut' could provide with even higher yields to solutions based on the generic parametric cuts. Since current version users can run the SmartRecut algorithm for a solution based on most popular Octonus generic parametric cuts. set of cuts will expand over time. Let's call them "Smart Cuts".

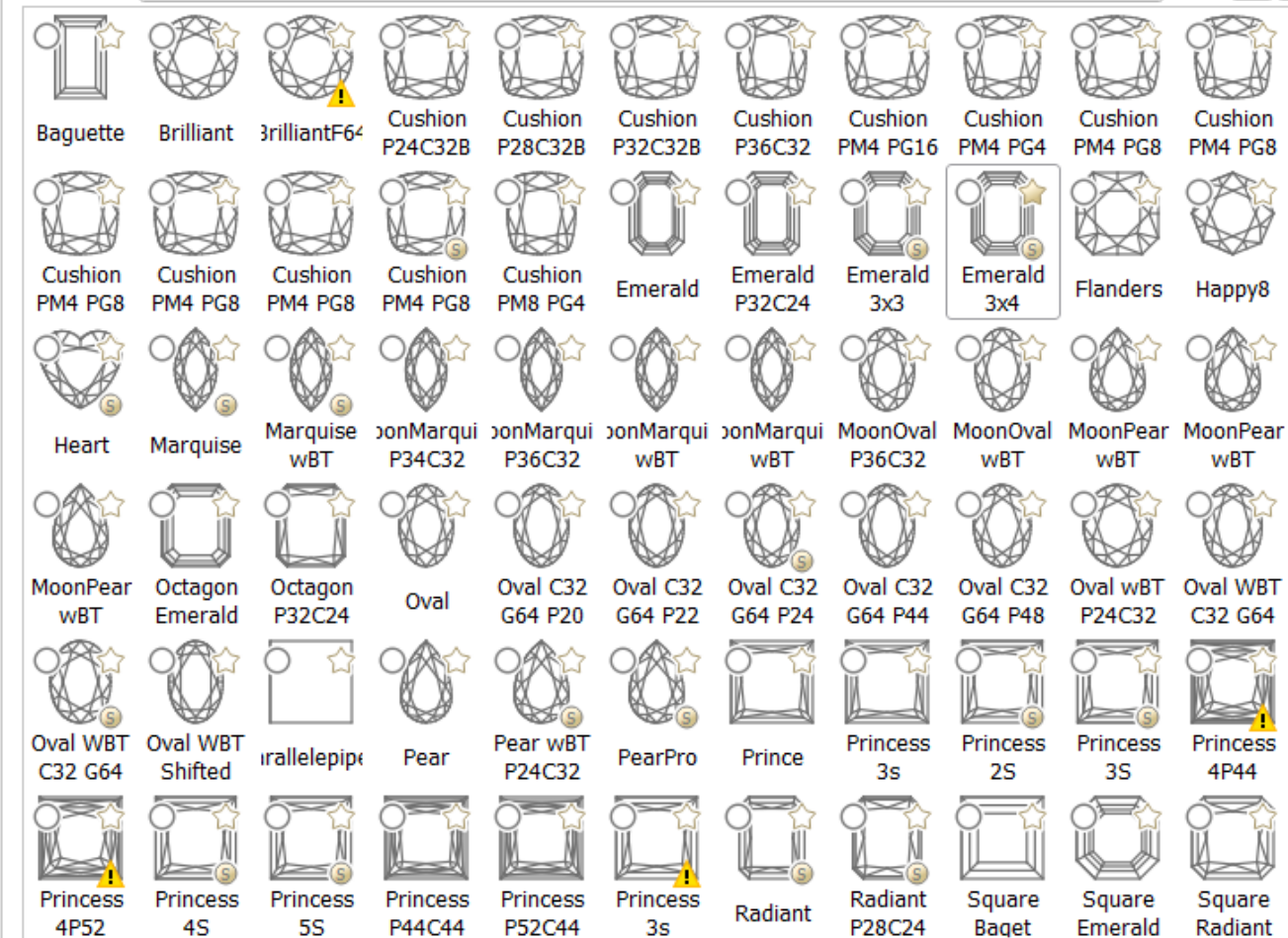
Smart Cuts are located in Cutbook "Generic Cuts". Smart Cuts are highlighted by badge "S" in the lower right corner of the cut. set of Smart Cuts will expand over time.



▼ Diamond Allocation

Algorithm: 22. Single (Recut) ▼

Cutbook: Generic Cuts 0/66



Smart Cut has its linked appraiser which is automatically displayed along with cut selection. There are two types of parameters in the appraiser of Smart Cut: parameters of generic parametric cut and parameters from the new In-house appraiser.

Consider firstly parameters of generic parametric cut. There are first stage of allocation by global algorithms and second stage by SmartRecut algorithm. Global algorithms of allocation vary values of considered parameters for search of optimal solution. But SmartRecut algorithm doesn't use these parameters. Also note that these parameters doesn't participate in final solution grading. An editing the limits of these parameters is available in a user-friendly software interface in the panel appraiser editor. Previously, this operation was laborious, requiring manually edit of the appraiser txt-file.

Allocation solutions

Plans & Scans

#

Cut

Price

Mass

Alloc

Arbit

m

Gr

CutGr

Sym

Br

Profile

Imported model

8.8776

5

Radiant P28C...

66983\$

4.5882

SR VS1

EX

EX

EX

Profile1

3

Radiant P28C...

66544\$

4.5537

SR VS1

EX

EX

EX

Profile1

4

Radiant P28C...

66398\$

4.5463

SR VS1

EX

EX

EX

Profile1

6

Radiant P28C...

66398\$

4.5440

SR VS1

EX

EX

EX

Profile1

7

Radiant P28C...

66105\$

4.5279

SR VS1

EX

EX

EX

Profile1

10

Radiant P28C...

65959\$

4.5154

SR VS1

EX

EX

EX

Profile1

9

Radiant P28C...

65959\$

4.5110

SR VS1

EX

EX

EX

Profile1

8

Radiant P28C...

65666\$

4.4945

SR VS1

EX

EX

EX

Profile1

1

Radiant P28C24

59670\$

4.4224

VS1

VG

VG

EX

Profile1

2

Radiant P28C24

58320\$

4.3196

VS1

VG

VG

EX

Profile1

Plan 8

Inclusions (0)

QC Filter

Appraiser

Manual appraiser selection

Cut: Radiant P28C24

Appraiser: Radiant P28C24

Profile: Profile1

Absolute+Relative

Hide Editor

Diamond Allocation

Algorithm: 22. SmartRecut (Brilliant, Oval, AnyCut)

Allow Girdle Extra Facets

Presets: All presets

Fix Girdle

Cut grade: EX

Fix Crown

Symmetry grade: EX

Fix Pavilion

Fix finished facets

Safe Boundaries

Start Allocation

Radiant P28C24

Profile: Profile1

Show Presets

Absolute Proportions

Absolute Symmetry

Relative Proportions

Relative Symmetry

Discounts

Parameter	Grade	Value	[FR]	[GD]	[VG]	[EX]	[EX]	[VG]	[GD]	[FR]
GirdleRatio	EX	1.377	1.18	1.18	1.2	1.2	1.38	1.42	1.46	1.46
Table	EX	69.047	51	53	54	55	70	71	73	75
CrownHeight	EX	21.968	12	13	14	15	22	23	24	25
GirdleBezel	EX	3.969	1.6	1.8	2.1	2.3	4	4.5	5.5	6.5
PavilionHeight	EX	60.137	50	52	54	55	65	66	68	70
TotalHeight	EX	86.074	57	58	59	60	88	89	90	90
CrownGoldStarSlope	EX	45.000	32	33	34	35	45	46	47	48
CrownSilverStarSlope	EX	65.532	52	53	54	55	72	73	74	75
PavilionGoldStarSlope	EX	40.091	38.7	38.7	38.7	38.7	46.7	47.7	48.7	49.7
PavilionSilverStarSlope	EX	68.000	35	40	45	50	68	70	72	75
SweetLine	EX	-1.801	-109	-106	-103.5	-101	101	103.5	106	109
Pavilion_Angle			38	40	42	43	50	51	53	55
Crown_H2toH			30	35	40	45	55	60	65	70
Corner_Break_Ratio			10	15	18	20	35	40	45	50
Scarf_Front_ht0			7	8	9	10	15	17	20	25
Scarf_Front_ht1			3	5	6	7	14	15	20	25
Scarf_Flank_ht0			7	8	9	10	15	17	20	25
Scarf_Flank_ht1			3	5	7	8	13	15	20	25
Table_Corner_Break			15	20	25	30	42	43	45	50
Scarf_Flank_Angle			35	40	45	50	57	60	65	75
Corner_Break_Angle			33	36	38	40	50	52	54	57
Upper_Girdle_Break			57	58	59	60	80	81	82	83
Upper_Corner_Break			57	58	59	60	80	81	82	83
Lower_Facets_Depth			67	68	69	70	85	86	87	88
Lower_Facets_Shift			15	16	17	18	24	25	26	27

Secondly consider parameters from the In-house appraisers. SmartRecut algorithm uses only these parameters during it's allocation stage. After getting of solutions the grading is produced by only these parameters. Sometimes solutions of global algorithms may have values of certain parameters that exceed the Excellent boundaries. In most cases SmartRecut will be able to fit these values in the Excellent group.

There is a sample of running of SmartRecut for one of Smart Cut - Radiant P28C24. There are solutions of SmarRecut with high yield and good optical performance:

Important! Known issues!

In the following cases, SmartRecut may not work on SmartCut solutions:

- Heart. Cut is not completed.
- PearPro, Pear_wBT.P24C32. Global algorithms may have mistake in values of CuletOffsetLength more than Relative interval. So Absolute and Relative intervals for SmartRecut are not compatible.
- Princesses (2S, 3S, 4S, 5S). Global algorithms have too big slope angle asymmetry for square Facet Types. It is conflict with SmartRecut parameter Angles_FacetTypesSlopeIdeality. The values of this parameter can be temporarily increased in presets for Princesses.

Updated profiles for Smart Cuts (Princess.2S to 5S)

Profiles were updated for Smart Princess Cuts: Princess.2S, Princess.3S, Princess.4S and Princess.5S.

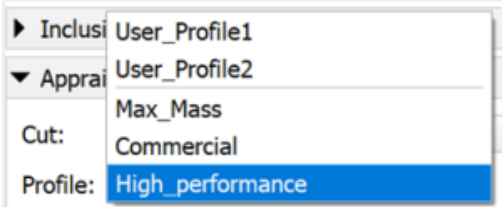
Each Smart Princess cut has five profiles.

Three non-editable pre-configured profiles:

- High_performance
- Commercial
- Max_Mass

Two user profiles:

- User_Profile1
- User_Profile2



Pre-configured profiles are designed to give users a fast start with the allocation and consider the user's needs. Three profiles are required to grant the user the desired range of options:

- Princess allocated with the High_performance profile will receive high performance and symmetry. But mass may be lower in comparison with the remaining 2 profiles.
- Commercial profile gives balanced performance and yield.
- Max_Mass profile is designed to give high yield solutions but can sacrifice Optical performance.

Solutions created with pre-configured Profiles are shown in the Cutwise Project:

<https://cutwise.com/projects/4fb21e39-ac88-493e-8fc7-afe6923b7fb2/solutions?sort=w4B9EC74vbhVPzAFwEmEHY3MQfaX3DI0aZQ>

Profile:		High_Performance		Commercial		Max_Mass	
		22.Single (Recut)	22.Smart Recut	22.Single (Recut)	22.Smart Recut	22.Single (Recut)	22.Smart Recut
	SCAN	64	83	69	91	73	92
	1.49ct — 🔍❤️	0.99ct \$2,614 🔍❤️	1.00ct \$3,380 🔍❤️	1.01ct \$3,414 🔍❤️	1.02ct \$3,448 🔍❤️	1.02ct \$3,448 🔍❤️	1.03ct \$3,481 🔍❤️
Product SKU	Princess-3F-Smart...	64-Princess-3F-S...	83-Princess-3F-S...	69-Princess-3F-S...	91-Princess-3F-S...	73-Princess-3F-S...	92-Princess-3F-S...
Office							
ASET	—						
Price	—	\$2,614	\$3,380	\$3,414	\$3,448	\$3,448	\$3,481
Price Per Carat	—	\$2,640/ct	\$3,380/ct	\$3,380/ct	\$3,380/ct	\$3,380/ct	\$3,380/ct
Carat Weight	1.49ct	0.99ct	1.00ct	1.01ct	1.02ct	1.02ct	1.03ct
Cut Performance	—	0.84	0.85	0.85	0.86	0.83	0.82
Fire	—	0.44	0.49	0.51	0.50	0.45	0.45
Brilliance	—	0.98	0.97	0.96	0.97	0.95	0.94
Scintillation	—	1.33	1.21	1.09	1.09	1.39	1.45
Optical Symmetry	—	7.97	6.91	7.53	6.41	6.51	5.55
Spread	—	-0.18ct	-0.18ct	-0.18ct	-0.19ct	-0.22ct	-0.22ct

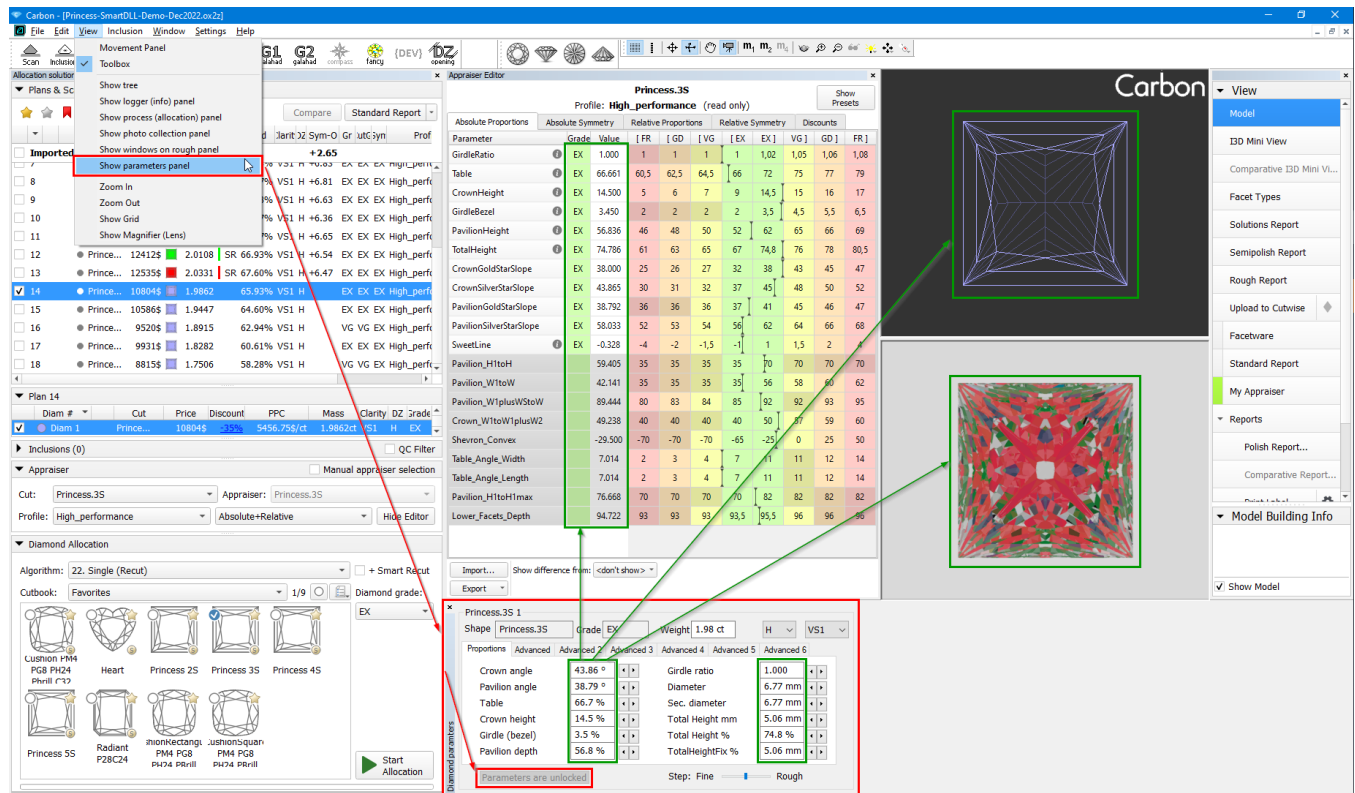
The first pair of solutions are created by 22.Single Recut and 22.SmartRecut using the High_Performance profile. Note the Optical performance of these solutions.
The second pair of solutions uses the Commercial profile and the third pair uses the Max_Mass profile. Max_Mass solutions have lower optical performance and Symmetry, but higher yield.

Users can select one of the pre-configured profiles and immediately go to the allocation procedure without laborious Profiles modification.

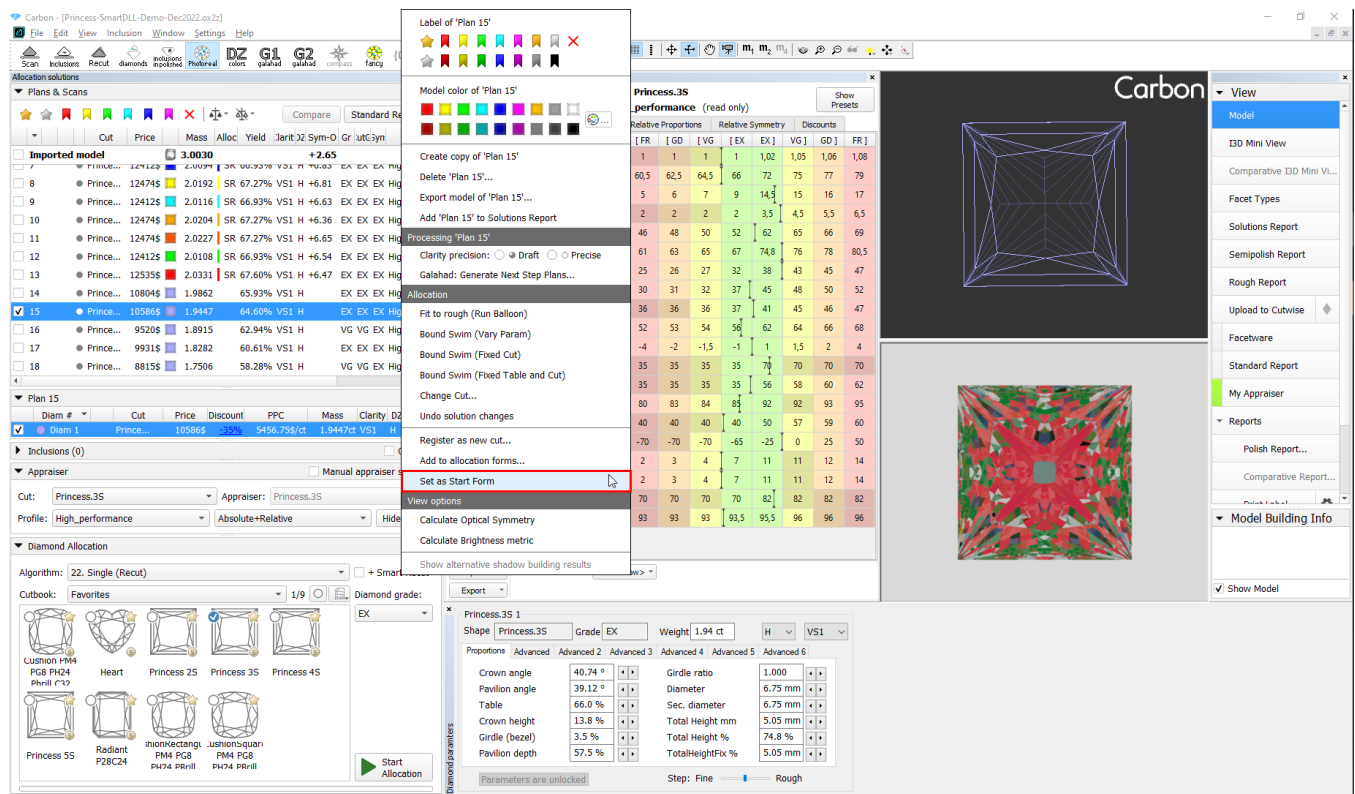
For users that want to manually adjust Profiles – Pre-configured profiles can be a good starting point for modification. Users can copy Parameters from pre-configured profiles to one of the editable profiles User_Profile1 or User_Profile2 and then modify desired Parameters (for instance, Total depth, Table or Crown/Pavilion Main facets Slopes limits) as per Factory requirements.

Smart Cut appraisers forms

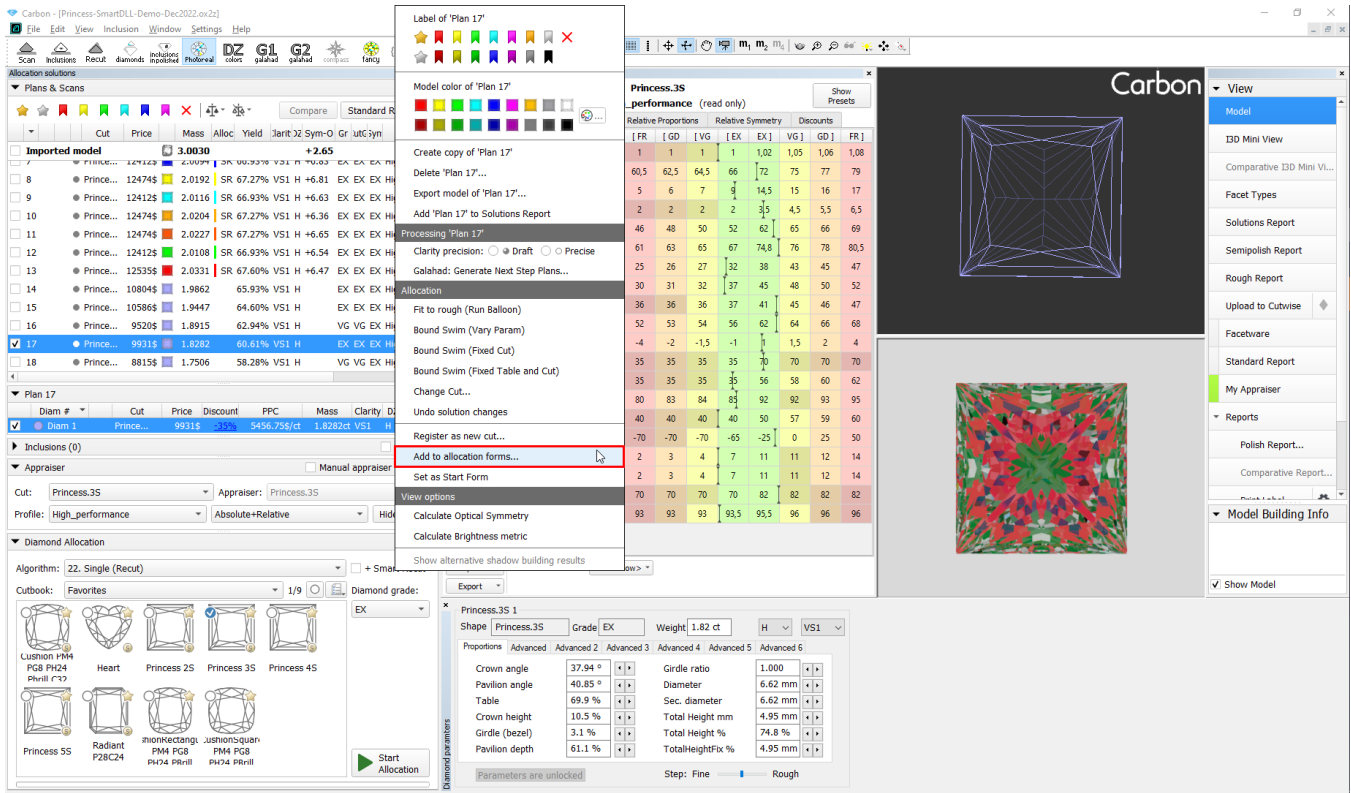
SmartCut works full-fledged if good start form set appropriating to factory standards. Open Diamond Parameter panel and adjust the parameters so that the form has high Optical Performance and Excellent grade.
If start form grade is worse than EX then global allocation algorithms will not work correctly.



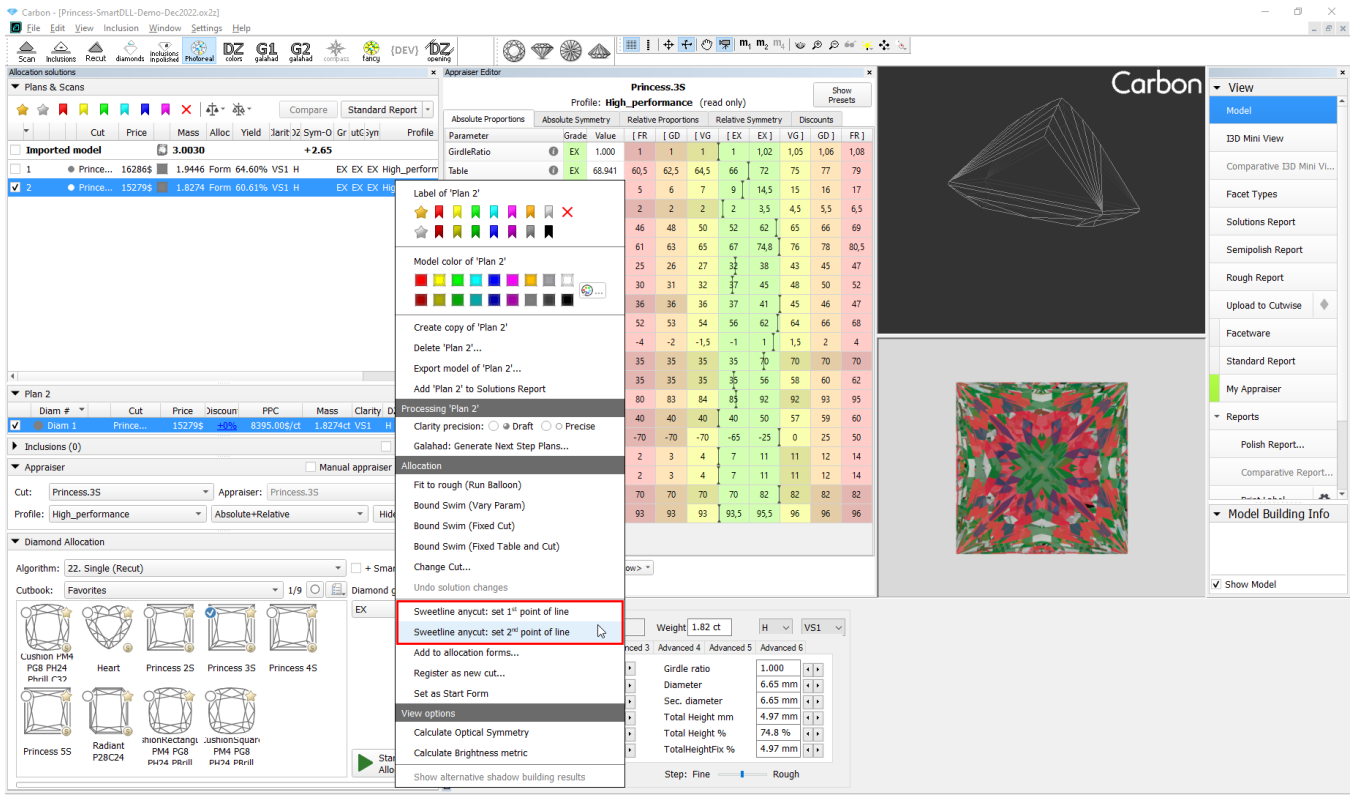
Set the form as a Start Form using the context menu.



Sweetline requires two good forms (see documentation on [Goodwin](#)). Create the second Sweetline form in the same way (via Diamond Parameter). Add the form using the context menu.



Mark required forms as Sweetline forms.



Gold and Silver Stars in Facet Types

Factories have their limits on the angles of certain facet types. They need an easy way to specify which angles should be controlled in optimization and displayed in reports. For this purpose, the new attributes has been introduced - Gold and Silver Stars.

There is a video about Gold and Silver Stars:

Video | Gold and Silver Stars in Facet Types

Published:	2022, December 16	Last Updated:	2021, December 16	v.2.0
Your browser does not support the HTML5 video element				
Video summary: <ul style="list-style-type: none">• New attributes for Facet Types are introduced - Gold and Silver Stars• Gold and Silver Stars symbolize the primary and additional slope angles.• When registering a new Goodwin Cut, you can choose the template that is most appropriate for your cut and appraiser requirements.• When registering you can open Facet Types to adjust the stars. - The slope angles are the same in the appraiser, in the Standard and in the i3D mini reports. And Cutwise gets the same values.				
Video keywords: Gold Stars, Silver Stars, Facet Types				
Data: PrincessDemo.ox2z				
Published in:	Release Notes	2023-01-19 - HP Carbon 1.7.6		
	Documentation	NA		
	Playlists	NA		
	Also	As Separate Page Specification		

Gold Stars symbolize the primary facets of the crown and pavilion and Silver Stars additional angles that factories control in their appraisers.

If the Cut has Gold Stars in Facet Types, then the CrownGoldStarSlope Proportions (Crown angle average) and PavilionGoldStarSlope Proportions (Pavilion angle average) are calculated by the facets marked by Gold Star groups. Symmetry additionally controls deviations of facets with same type and tier but all different subtypes.

Similarly calculations are made for CrownSilverStarSlope and PavilionSilverStarSlope if the Cut has Silver Stars.

Facet Types

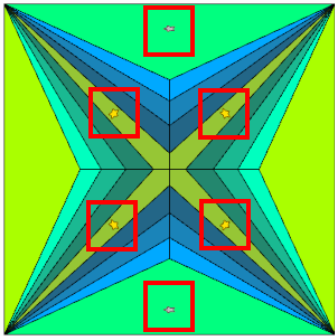
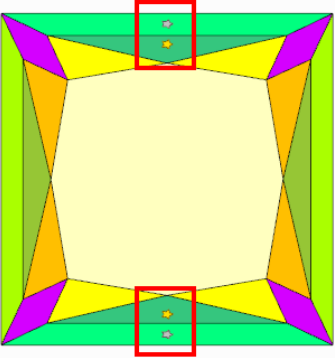
Facets	Element	*	Tier	Type	star	SubType	No.	Color	Alias
✕ 4	Crown			Star		Length			Rename...
✕ 4	Crown			Corner					Rename...
✕ 2	Crown	★	1	Main		Width			Rename...
✕ 2	Crown		1	Main		Length			Rename...
✕ 2	Crown	★	2	Main		Width			Rename...
✕ 2	Crown		2	Main		Length			Rename...
✕ 4	Girdle								Rename...
✕ 4	Pavilion			Chevron		Width	1		Rename...
✕ 4	Pavilion			Chevron		Width	2		Rename...
✕ 4	Pavilion			Chevron		Width	3		Rename...
✕ 4	Pavilion			Chevron		Length	1		Rename...
✕ 4	Pavilion			Chevron		Length	2		Rename...
✕ 4	Pavilion			Chevron		Length	3		Rename...
✕ 2	Pavilion	★	1	Main		Width			Rename...
✕ 2	Pavilion		1	Main		Length			Rename...
✕ 4	Pavilion	★	2	Main					Rename...

Total: 57 facets

SortNew Group

From Sample...Basic TypesAuto TypesApply

Export SampleMake ReportClose



Registration

When registering a new Goodwin Cut, you can choose the template that is most appropriate for your cut and appraiser requirements.

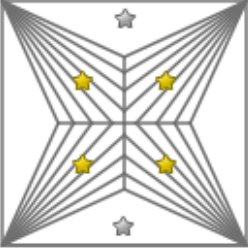
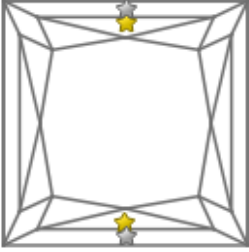
For example, in GoodwinGoldStars template, "1C1P" means that the Cut must have one (Gold) Star on the crown and pavilion. In GoodwinStars2C2P template, "2C2P" means that the Cut must have both Stars (Gold and Silver) on the crown and pavilion.

Register new cut

Cut name:

PrincessDemo

Selected model contains Facet Types!
[Open Facet Types to adjust](#)



☒ Goodwin ☐ ASCII

☒ Create appraiser for your new cut from selected template (recommended)

AnycutBasic
Goodwin1C1P
Goodwin1C2P
Goodwin2C3P
Goodwin_Stars1C1P
Goodwin_Stars1C2P
Goodwin_Stars2C2P

Select the template!

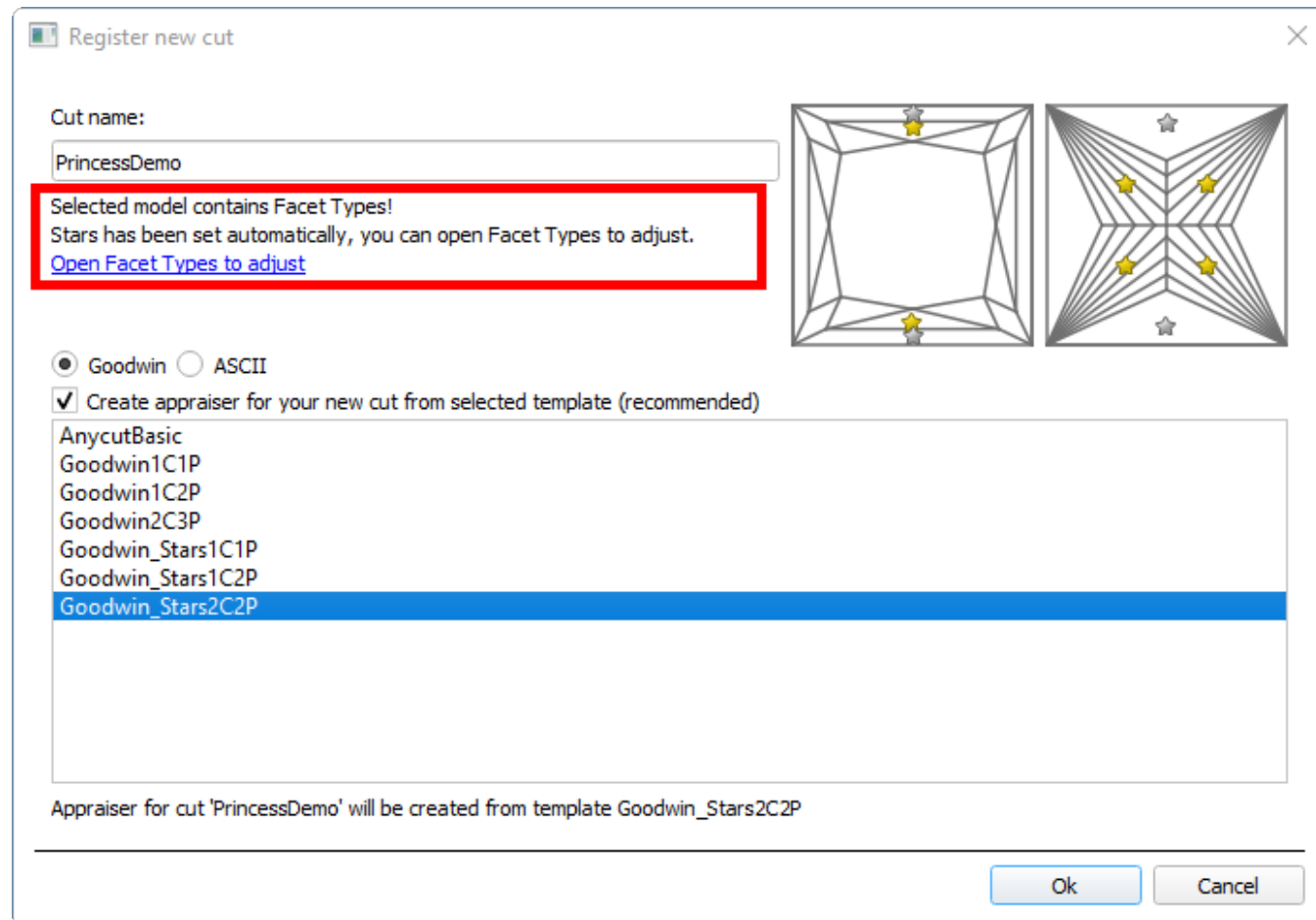
Ok

Cancel

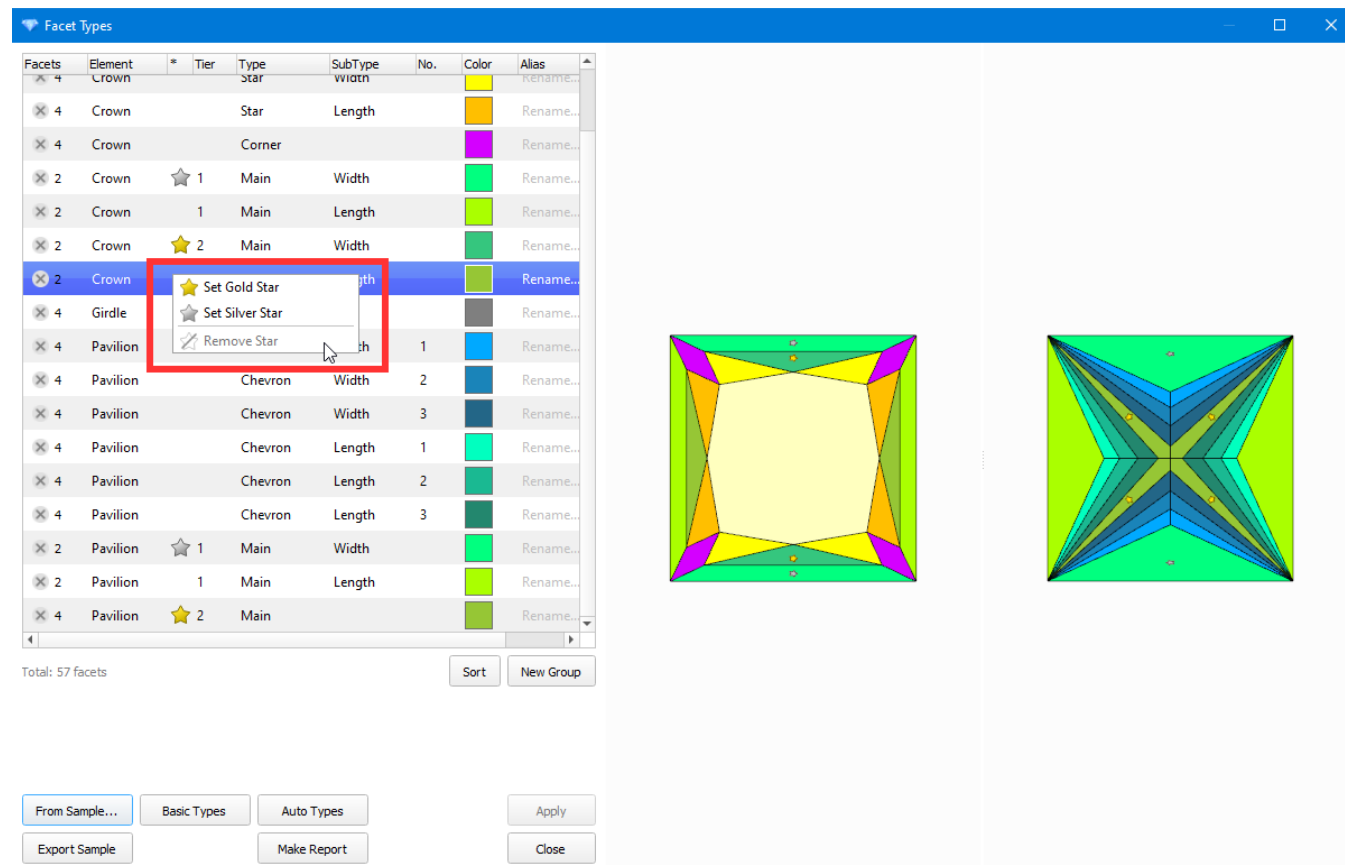
The following cases are possible:

Case 1. The stars are set automatically.

Most often you will see the message "Stars has been set automatically, you can open Facet Types to adjust".



It means you can "Open Facet Types to adjust", call the context menu and set the Stars on the desired facet groups.



Then click Apply, close the Facet Types window and register your Cut.

Also, you may see the facets marked with the Stars on the thumbnail on the right.

Register new cut

Cut name:
PrincessDemo

Selected model contains Facet Types!
Stars has been set automatically, you can open Facet Types to adjust.
[Open Facet Types to adjust](#)

☒ Goodwin ☐ ASCII

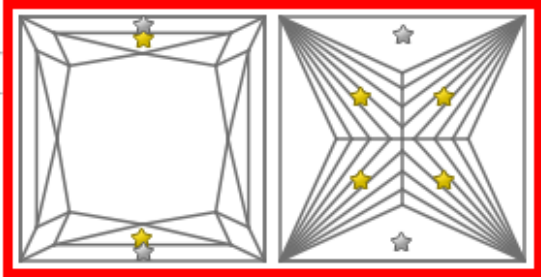
☒ Create appraiser for your new cut from selected template (recommended)

AnycutBasic
Goodwin1C1P
Goodwin1C2P
Goodwin2C3P
Goodwin_Stars1C1P
Goodwin_Stars1C2P
Goodwin_Stars2C2P

Appraiser for cut 'PrincessDemo' will be created from template Goodwin_Stars2C2P

Ok

Cancel



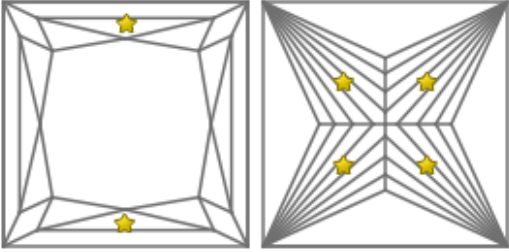
Case 2. The message "Failed to set the Stars automatically. Please set them manually in Facet Types with the context menu" will appear.

Register new cut

Cut name:
PrincessDemo

Selected model contains Facet Types!

Failed to set the Stars automatically.
Please set them manually in Facet Types with the context menu.
[Open Facet Types to adjust](#)



☒ Goodwin ☐ ASCII

☒ Create appraiser for your new cut from selected template (recommended)

AnycutBasic
Goodwin1C1P
Goodwin1C2P
Goodwin2C3P
Goodwin_Stars1C1P
Goodwin_Stars1C2P
Goodwin_Stars2C2P

Appraiser for cut 'PrincessDemo' will be created from template Goodwin_Stars2C2P

Ok

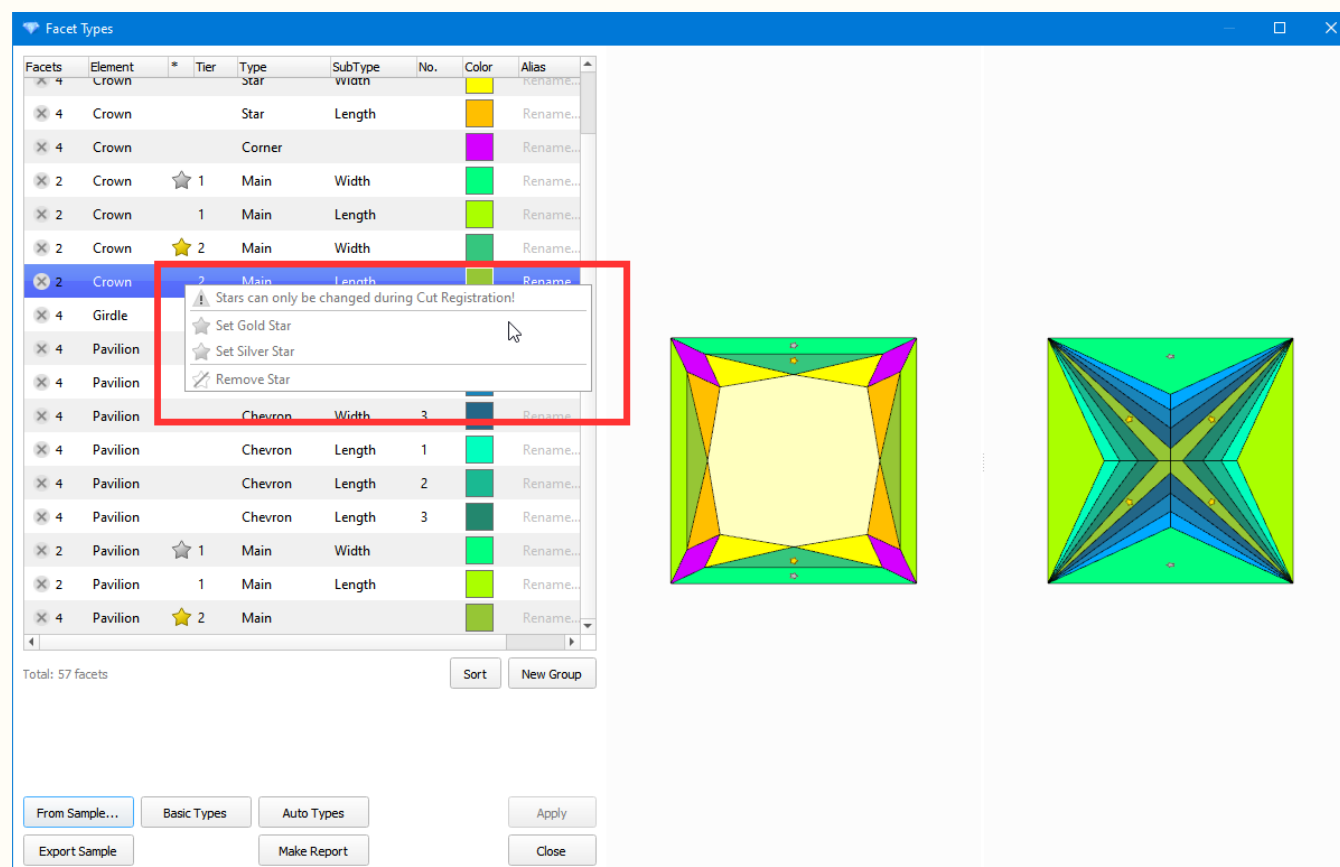
Cancel

In this case, you must open the Facet Types window and manually set the stars on the desired facets groups through the context menu.

Note! In this case, we recommend checking your Facet Types, as stars should be placed automatically on normal Facet Types.

Case 3. If your cut already has stars on the desired facet groups, go through the normal cut registration steps. This can happen if you create a new cut from solution with cut that already had stars.

Important! Once you have created cut with the Stars, they cannot be removed or rearranged. All preforms, optimization solutions, and SmartNormalize solutions derived from them will inherit the stars from the first master preform.



Reporting

After stars marking the slope angles are **the same** in the Appraiser Editor panel:

PrincessDemo											
Profile: Profile1											Show Presets
Absolute Proportions		Absolute Symmetry		Relative Proportions			Relative Symmetry			Discounts	
Parameter	Grade	Value	[FR]	[GD]	[VG]	[EX]	EX]	VG]	GD]	FR]	
GirdleRatio	EX	1.013	0,94	0,95	0,96	0,97	1,03	1,035	1,035	1,035	
Table	EX	68.815	67	67	67	67	73	78	79	79	
CrownHeight	EX	12.435	8,5	8,7	9,2	9,5	13,7	14	14,4	15,2	
GirdleBezel	EX	3.699	0,2	0,3	0,4	0,65	5	5,4	5,4	5,4	
PavilionHeight	EX	59.294	54,5	55	55,5	56	62,5	63,5	65,5	67	
TotalHeight	EX	75.427	68,3	68,8	69,3	69,8	77,5	79,5	82,5	83,5	
CrownGoldStarSlope	EX	35.094	30,8	30,8	30,8	30,8	37,3	37,3	37,8	38,3	
CrownSilverStarSlope	EX	42.629	38,4	38,4	38,4	38,4	44,9	44,9	45,4	45,9	
PavilionGoldStarSlope	EX	39.808	36	36	36	36	44	45	46	47	
PavilionSilverStarSlope	EX	58.635	53,8	53,8	53,8	53,8	61,8	62,8	63,8	64,8	
SweetLine	EX	-0.007	-100	-100	-100	-100	100	100	100	100	

...and in the Standard Report:

Standard Report

Settings

Print...

Quick Print

Cut:

Princess

Template:

Standard Report for princess

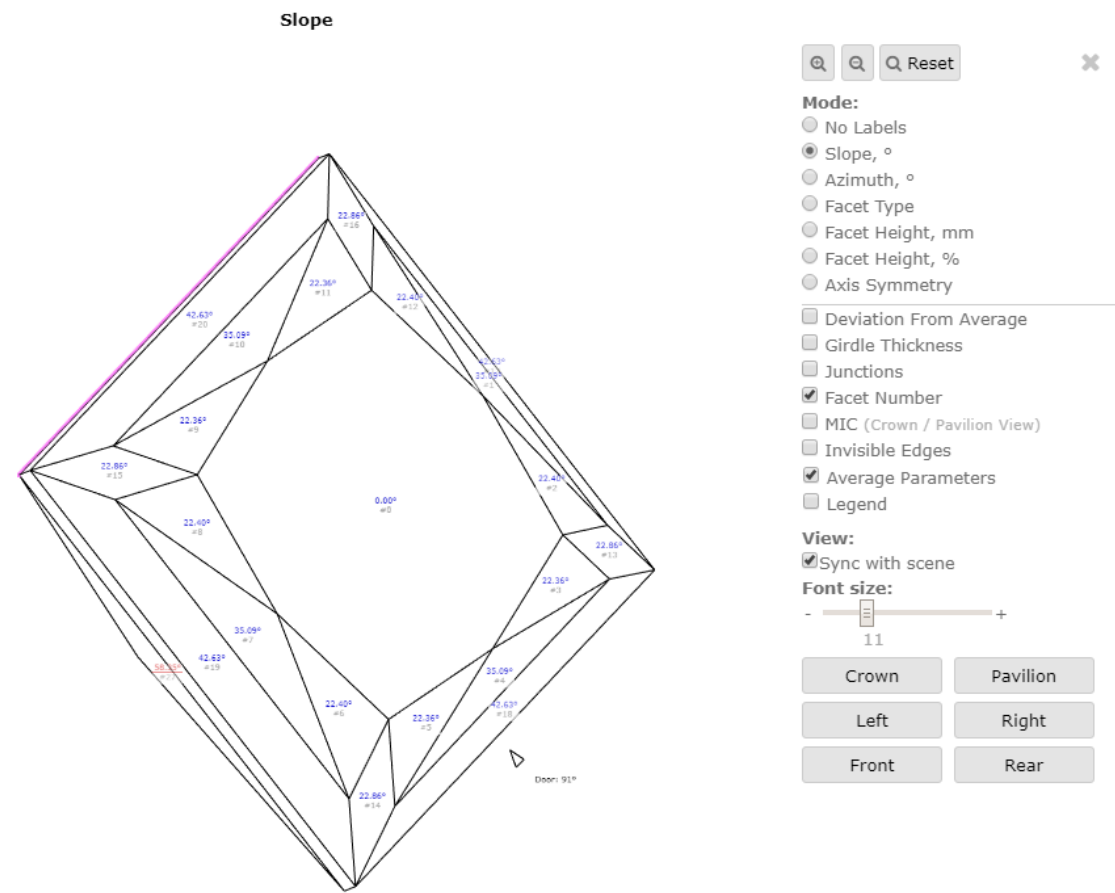
Enhanced precision:

0 digits

Cut	Princess	Model	2
Spread	-0.58 ct, -19.19 %	Scale weight, ct	N/A
Extra Facet Girdle / Nat	No	Corrected mass, ct	3.61, 3.6089
Cut appraiser	PrincessDemo	Cut grade	VG
Symmetry appraiser	PrincessDemo	Sym grade	EX
Model building info	N/A	Final grade	—

Parameter	Avg		Min	Max	Dev
Girdle Ratio (L\W)	1.013		—	—	—
Width, mm	8.239 mm		—	—	—
Length, mm	8.342 mm		—	—	—
Total height, %	6.214 mm	75.43 %	—	—	—
Crown height: Side, %	1.024 mm	12.43 %	12.43	12.43	0.00
Crown height: Corner, %	1.024 mm	12.43 %	12.43	12.43	0.00
Pavilion height: Side, %	4.885 mm	59.29 %	59.29	59.29	0.00
Pavilion height: Corner, %	4.885 mm	59.29 %	59.29	59.29	0.00
Table: Side, %	5.721 mm	69.01 %	68.82	69.20	0.38
Table: Corner w.r.t. Corner, %	58.55		58.55	58.55	0.00
Table: Corner w.r.t. Width, %	83.32		83.32	83.32	0.00
Diameter: Corner, %	11.725 mm	142.31 %	142.31	142.31	0.00
Girdle thickness: Side, %	0.305 mm	3.70 %	3.70	3.70	0.00
Girdle thickness: Corner, %	0.305 mm	3.70 %	3.70	3.70	0.00
Culet, %	0.000 mm	0.00 %	0.00	0.00	0.00
Crown Corner height, %	12.43		12.43	12.43	0.00
Crown angle, °	35.09		35.09	35.09	0.00
Crown first angle, °	42.63		42.63	42.63	0.00
Crown Corner angle, °	22.86		22.86	22.86	0.00
Pavilion angle, °	39.81		39.58	40.03	0.45
Pavilion first angle, °	58.64		58.35	58.92	0.56
Girdle facet angle, °	90.00		90.00	90.00	0.00
Table offset, %	0.000 mm	0.00 %	—	—	—
Culet offset, %	0.047 mm	0.57 %	—	—	—
Table-culet offset, %	0.047 mm	0.57 %	—	—	—

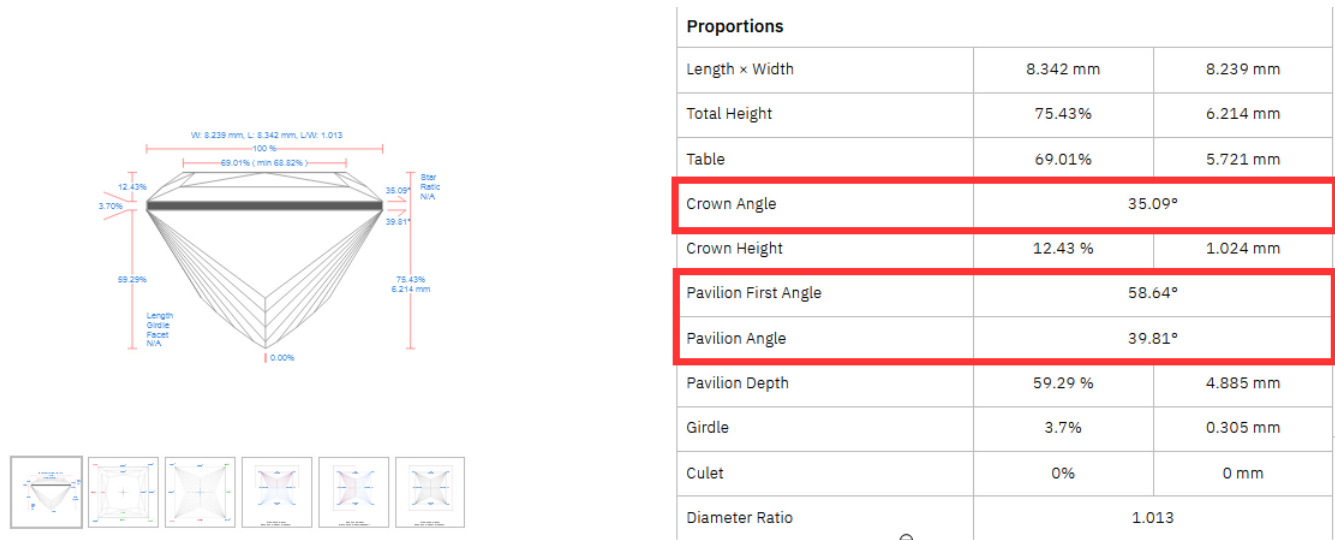
...and in the I3D mini report:



Diameter			Crown angle	Pavilion angle	Table: Side	Culet	Spread	Extra facet girdle / Nat
minimum	maximum	average						
8.239 mm	11.725 mm	10.556 mm	35.09°	39.81°	69.01 %	0.00 %	-19.19 %	No

Width	Length	Ratio (L/W)	Crown height: Side	Pavilion height: Side	Total height	Girdle height		
						Bezel	Bone	Valley
8.239 mm	8.342 mm	1.013	12.43 %	59.29 %	75.43 %	3.70 %	3.70 %	N/A %

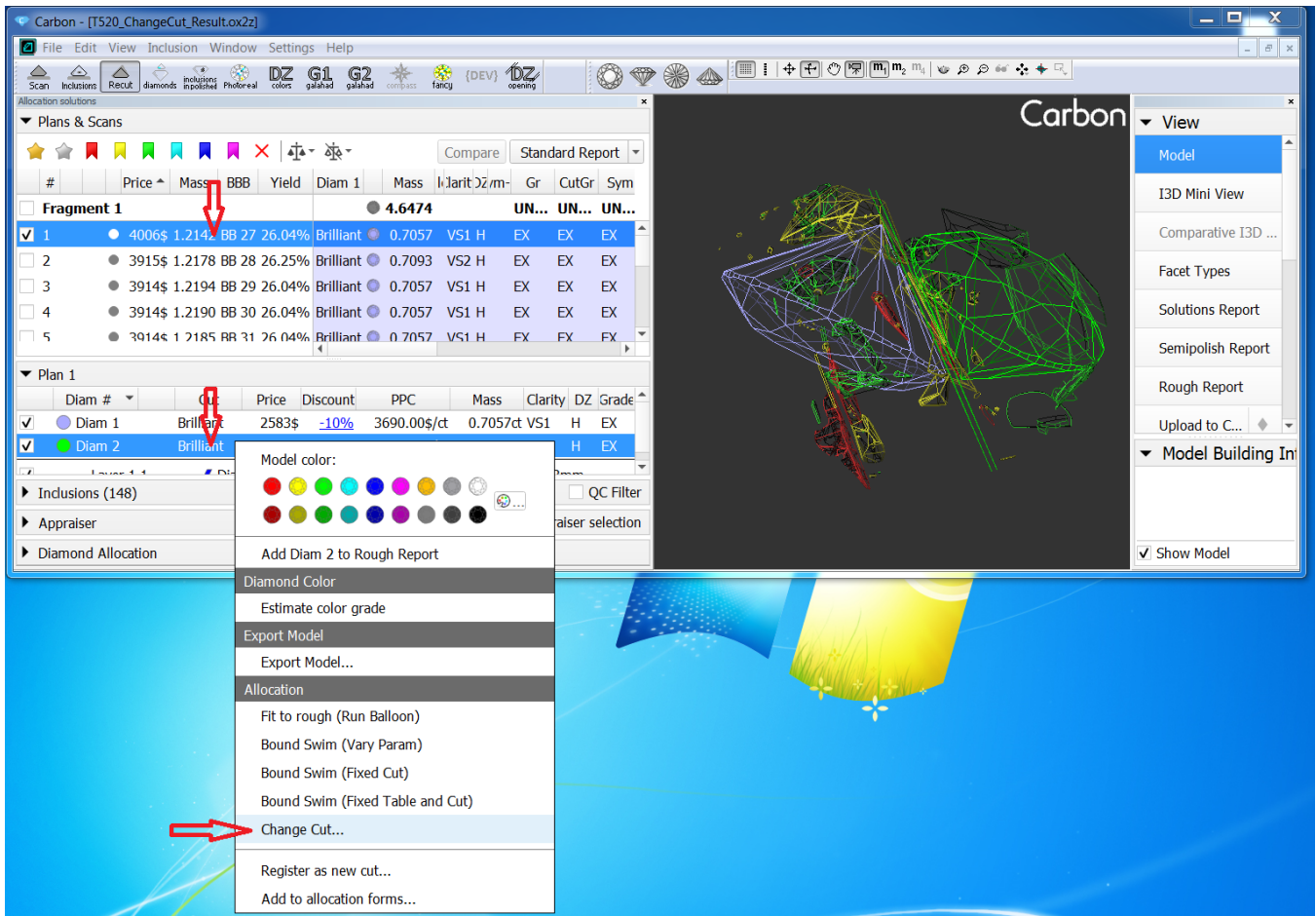
...and after upload to cutwise.com (<https://cutwise.com/diamond/485183>):



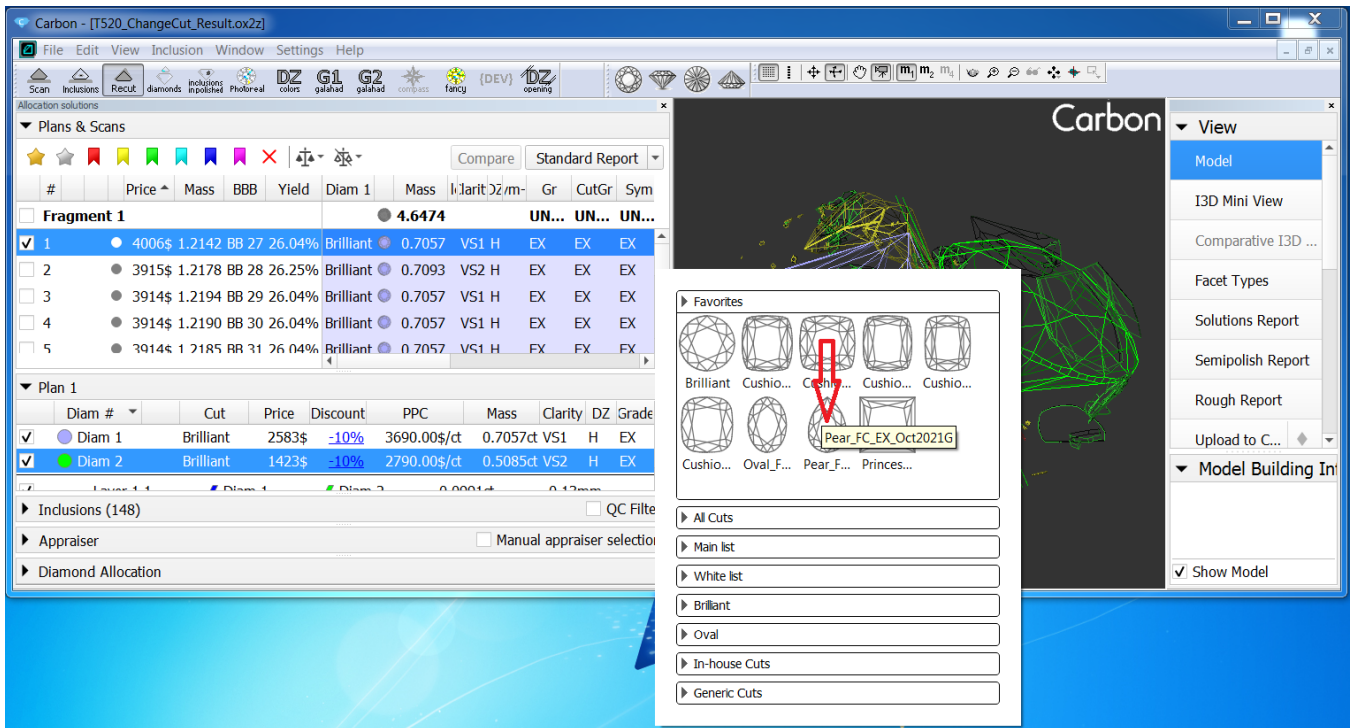
Change Cut: algorithm of manual allocation (Tools)

In solution with one or more diamonds operator can relatively quickly check what its weight and cost will be if you replace the cut of one of the diamonds. This operation can be used for solutions obtained by standard algorithms as well as for solutions obtained from external sources. For example, run the 13. Cascade-2M optimization for Brilliant and then replace the second diamond with Pear for one of the solutions.

To do this, you need to choose a solution and activate the diamond in it. Call the context menu, then the ChangeCut command.

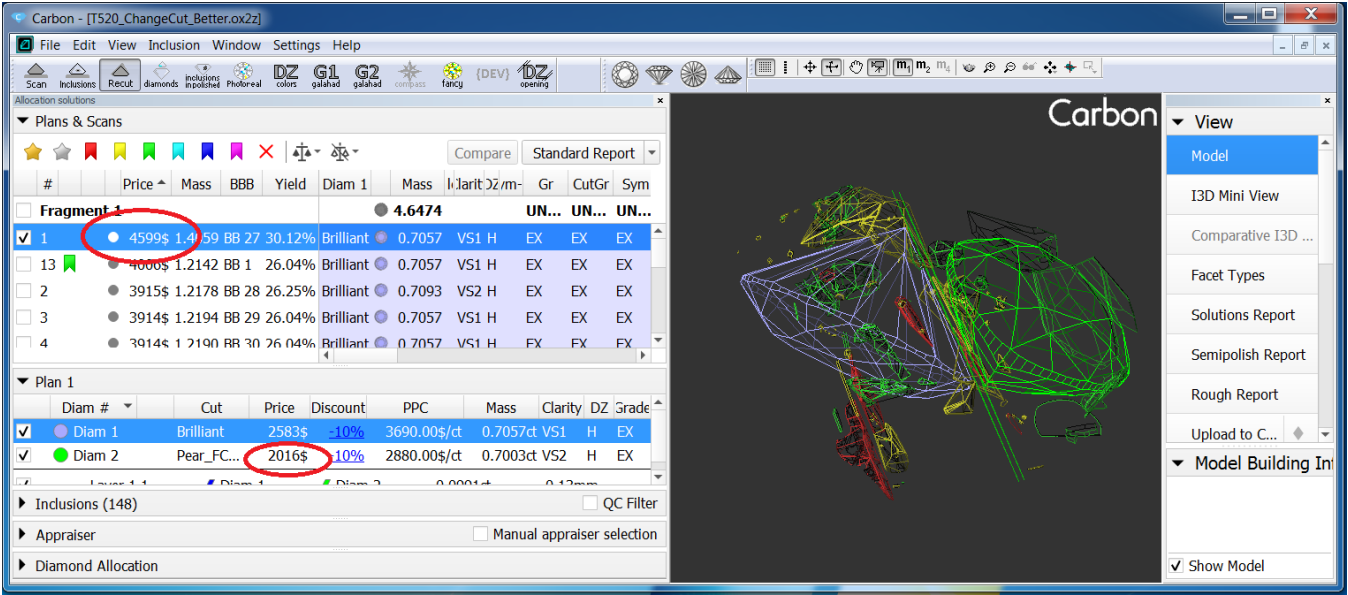


Then select new cut of the future diamond.

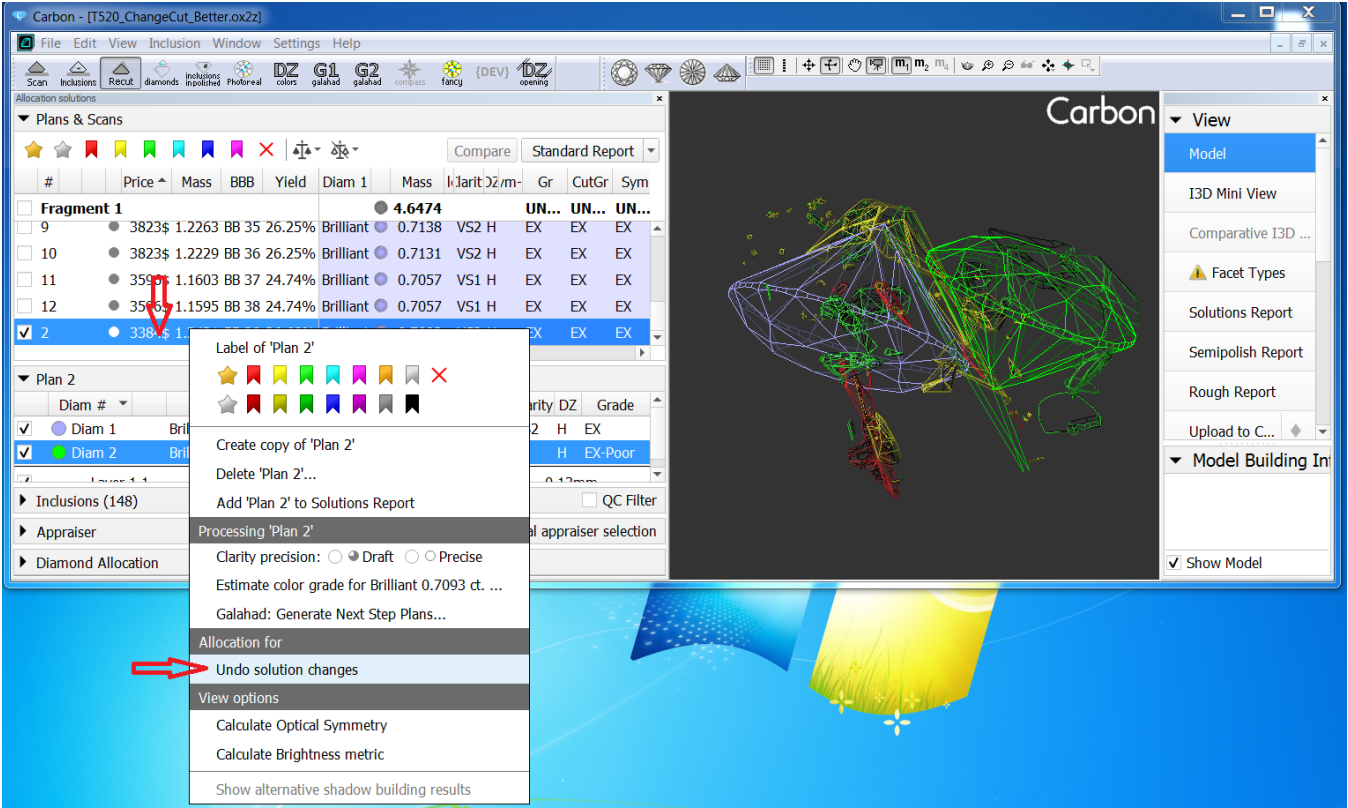


The algorithm starts. If there is a plane in the solution, then it will be used as an additional constraint. The algorithm replaces cut, saves the approximate location of the diamond, iterates of the yellow inclusions, and chooses the best solution. The forms of in-house cuts and forms from appraisers are not used.


After the algorithm completed, in the solution list, operator can observe the cost after changing the cut.



If for some reason you are not satisfied with the solution with a new facet, you can undo the changes made by calling the Undo Solution changes command from the context menu of the solution.



The increment price of the solution using the ChangeCut operation is an indicator that initially the list of cuts for optimization was far from optimal.

**Note**

Please note that algorithm **Change Cut...** in Carbon differs from **Change Cut...** in Pacor/Helium Rough!

Difference is that Carbon algorithm uses layers in solution as limitation. So diamond after **Change cut...** tool can not be located behind layer even if placement of diamond behind layer allows to increase it's mass.

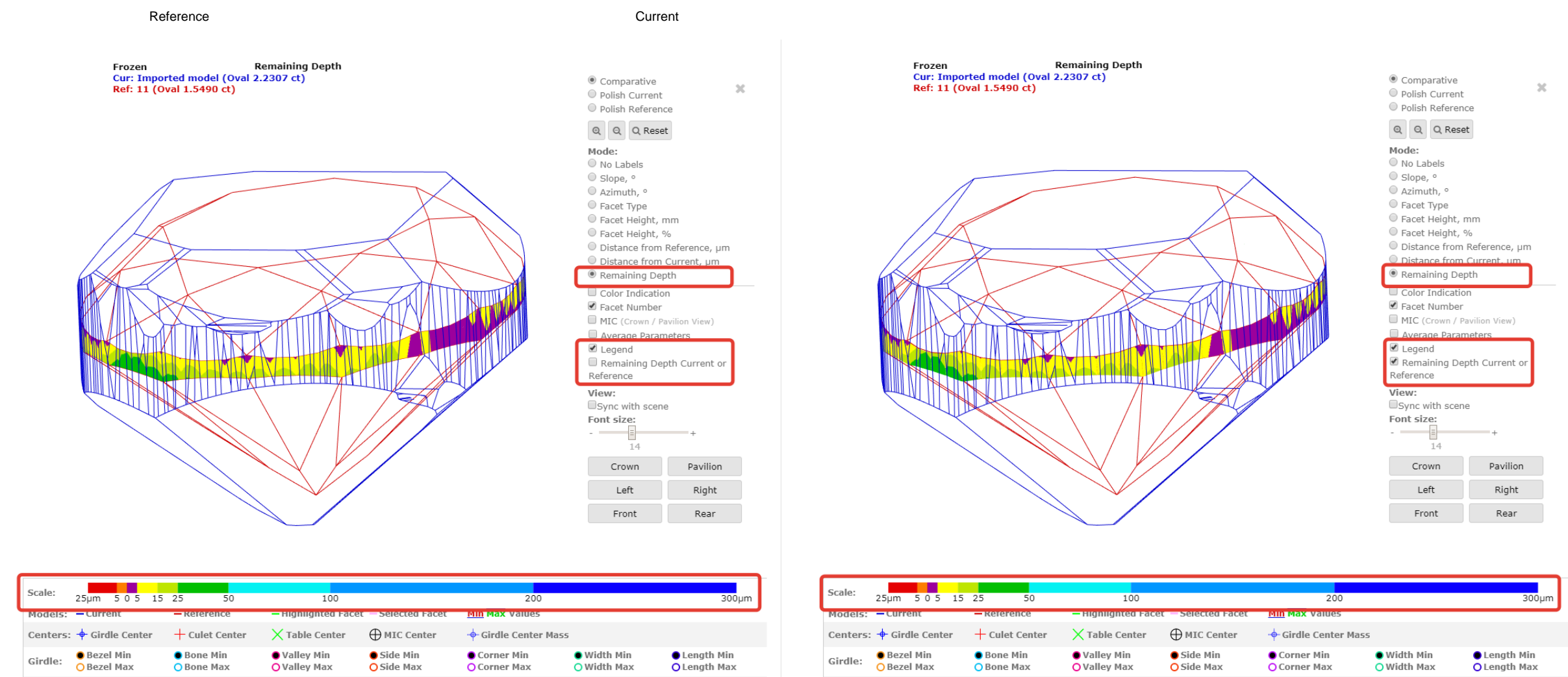
This is known bug and will be fixed in next version.

Remaining Depth - new Mode in Comparative I3D Reports

For optimal work on brutting, the cutter needs to see in the current moment the discrepancies of values between the planned girdle and the one obtained during scanning.

In Comparative I3D Reports, New mode - Remaining was added by two variants, color projection of the distance on the scan and reference model. This mode can be enabled by the button -

"Remaining Depth". The projections can be changed by the button - "Remaining Depth Current or Reference". On Legend a color scale was added of the distance.



Slice-type inclusion sandwich editing

There is a known "inclusion sandwich" technique used to allow the allocation algorithms to consider the part of inclusion inside the solution.
In some cases operator might improve the diamond plan modifying the sandwich configuration according to actual plan orientation and the remaining size of the inner part of inclusion.

Since current version it is possible to adjust the configuration of "slice" type inclusion sandwich manually.

How to?

1. Select the part of inclusion sandwich you need to adjust with the "inclusion selection tool" and/or the inclusion list.
2. When the required part of sandwich is activated select the object movement mode button in the upper toolbar ("hand" icon). The delimiting plane of the slice sandwich is shown like a circle-saw in the scene.
3. Move and rotate this plane with mouse.
4. Hold down the left mouse button and move the mouse ("drag" the mouse) - this makes the plane rotation, when you also hold the "Shift" key along mouse drag, the plane is moving.
On the end of each movement when left mouse button is released, the sandwich configuration is recalculated instantly.
5. Once you see that the sandwich has reached the required configuration you may try to improve the plan with the bound swim tool.
6. Once you finished work with inclusion sandwich ensure to deactivate object movement mode by switching to normal view mode ("camera" icon).

Video Inclusion sandwich - Change the sandwich geometry (Recalc)				
Published:	2022, December 15	Last Updated:	2021, December 15	v.1.0
Your browser does not support the HTML5 video element				
Video keywords: Sandwich, inclusion, editing				

Improvements in Sample21 model building method

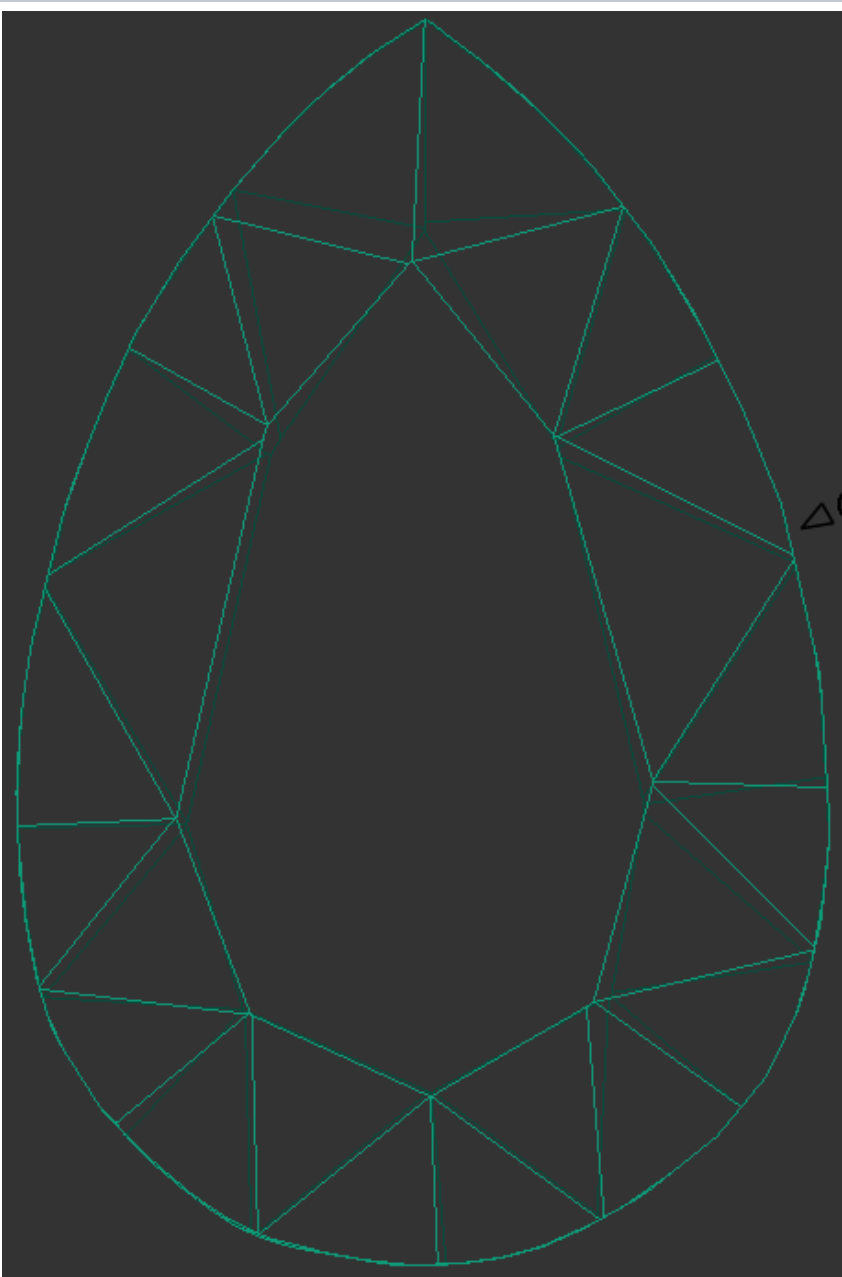
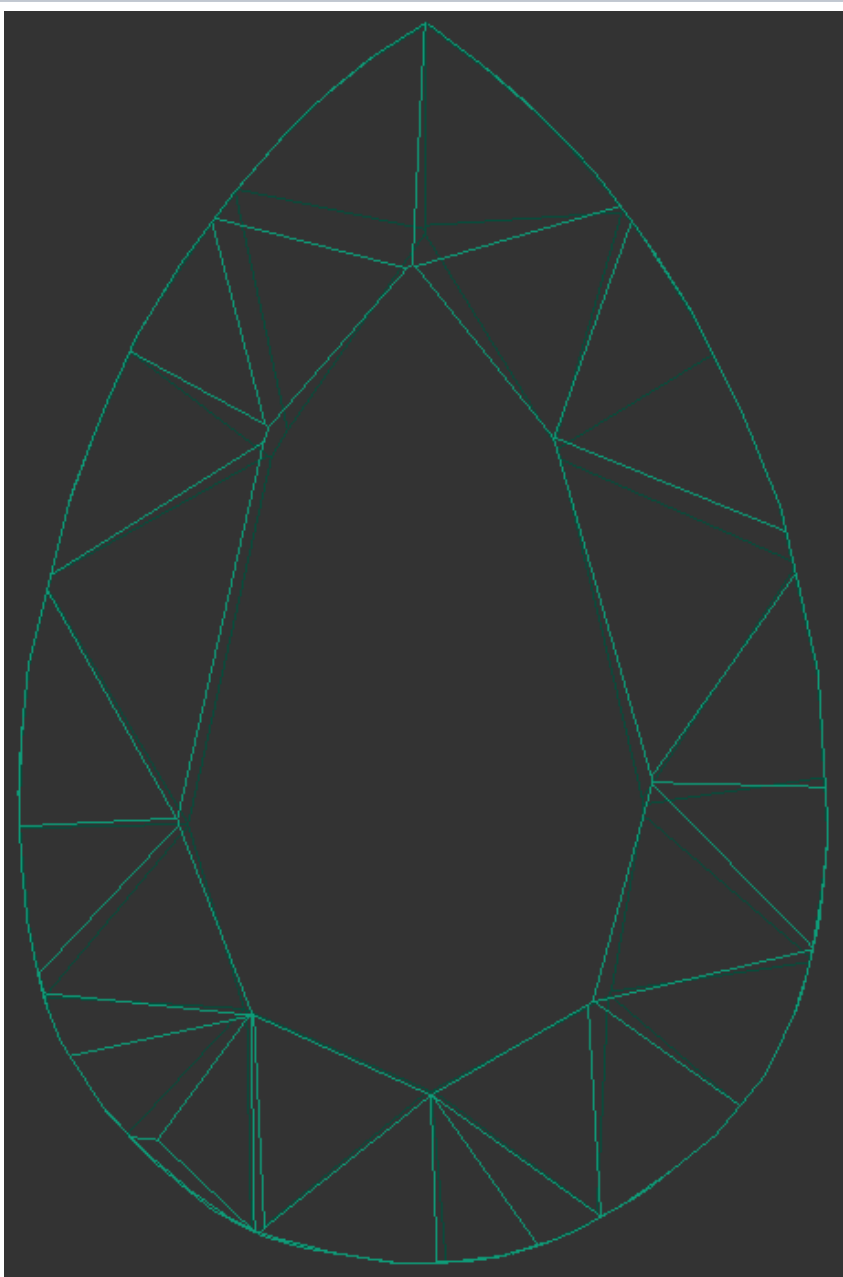
Model building is improved for Sample21 method.

This is link to [manual how to apply Sample21 method](#).

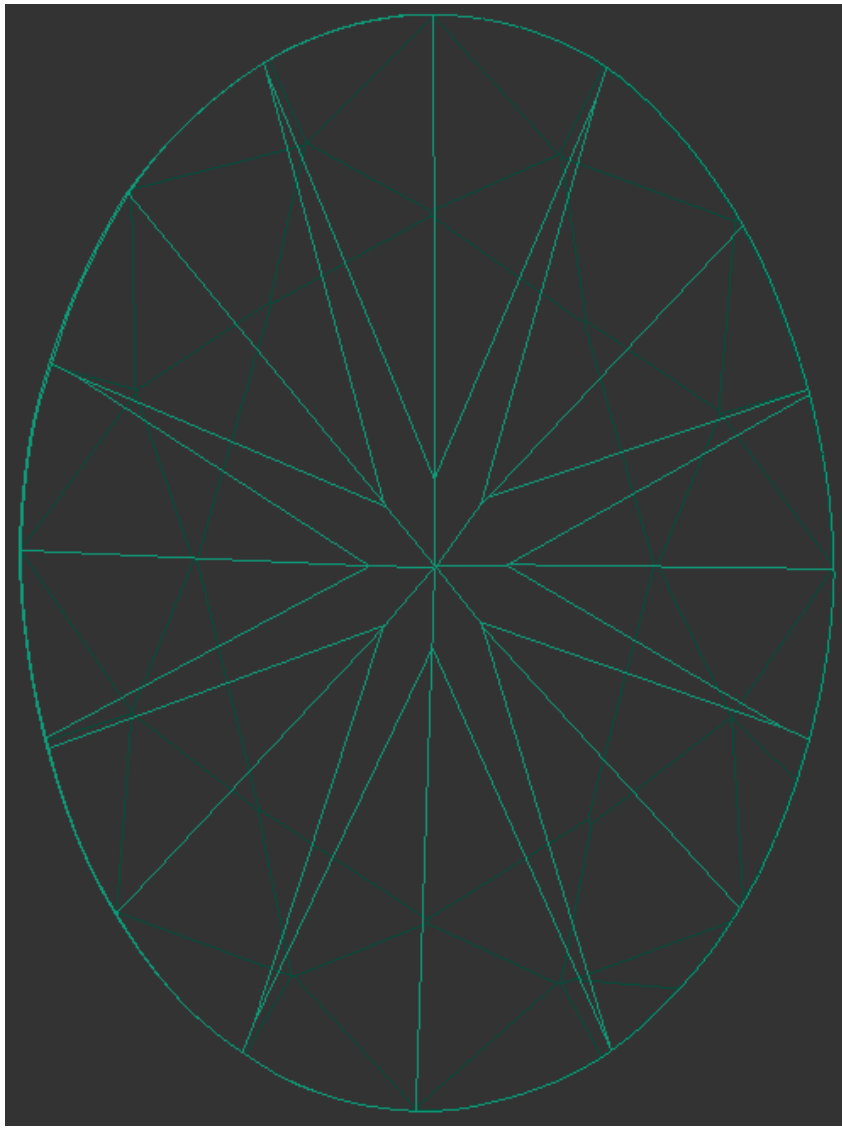
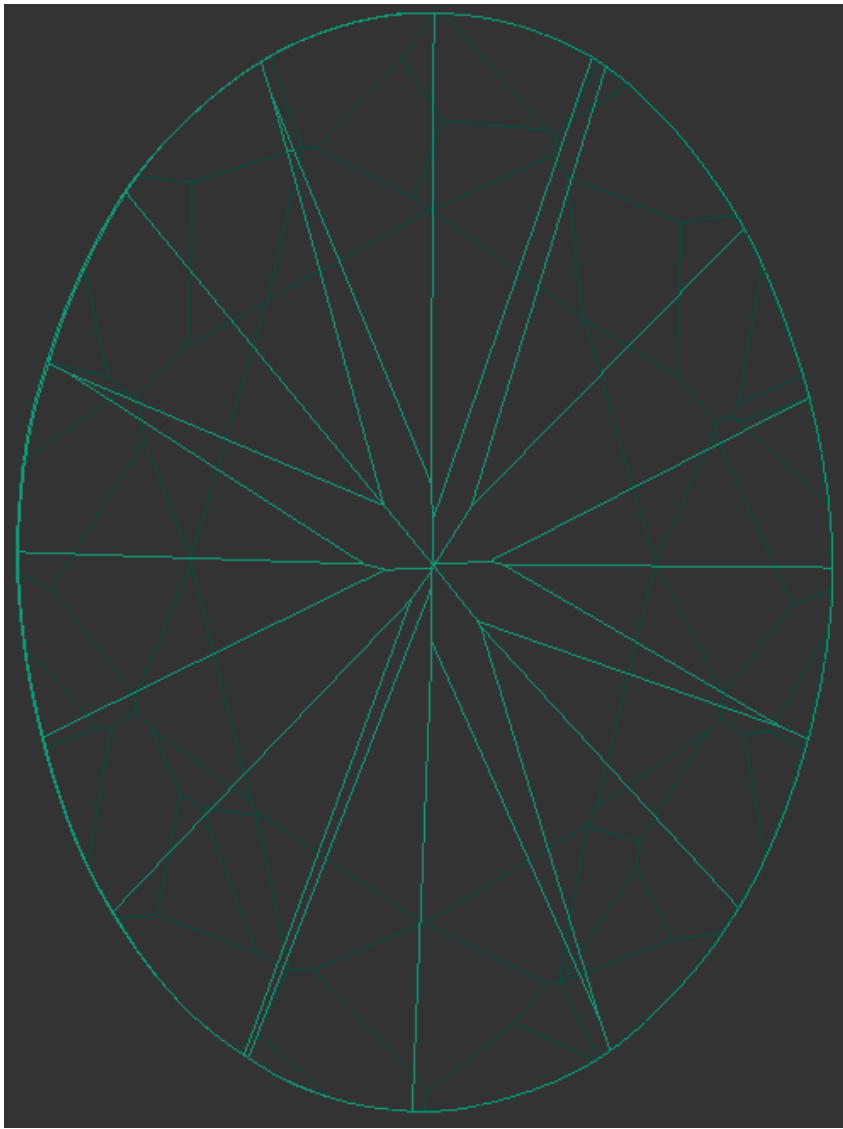
Examples of improvement:

[Pear_Sample21.ox2z](#)

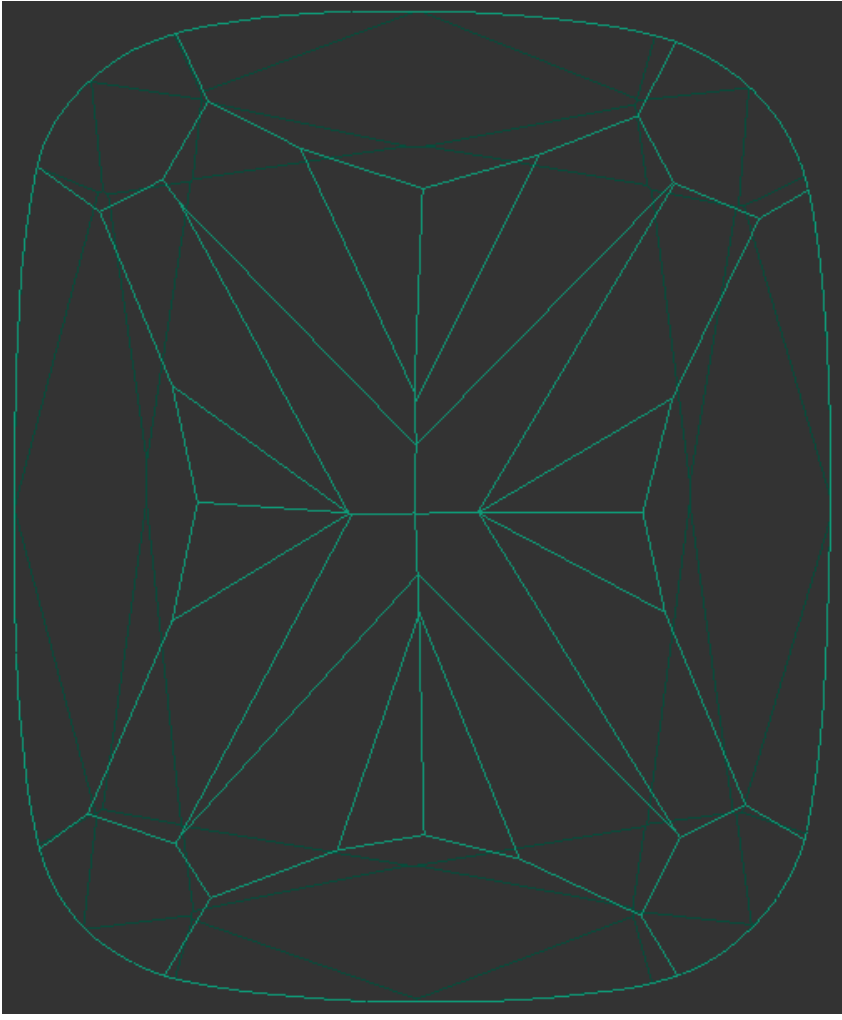
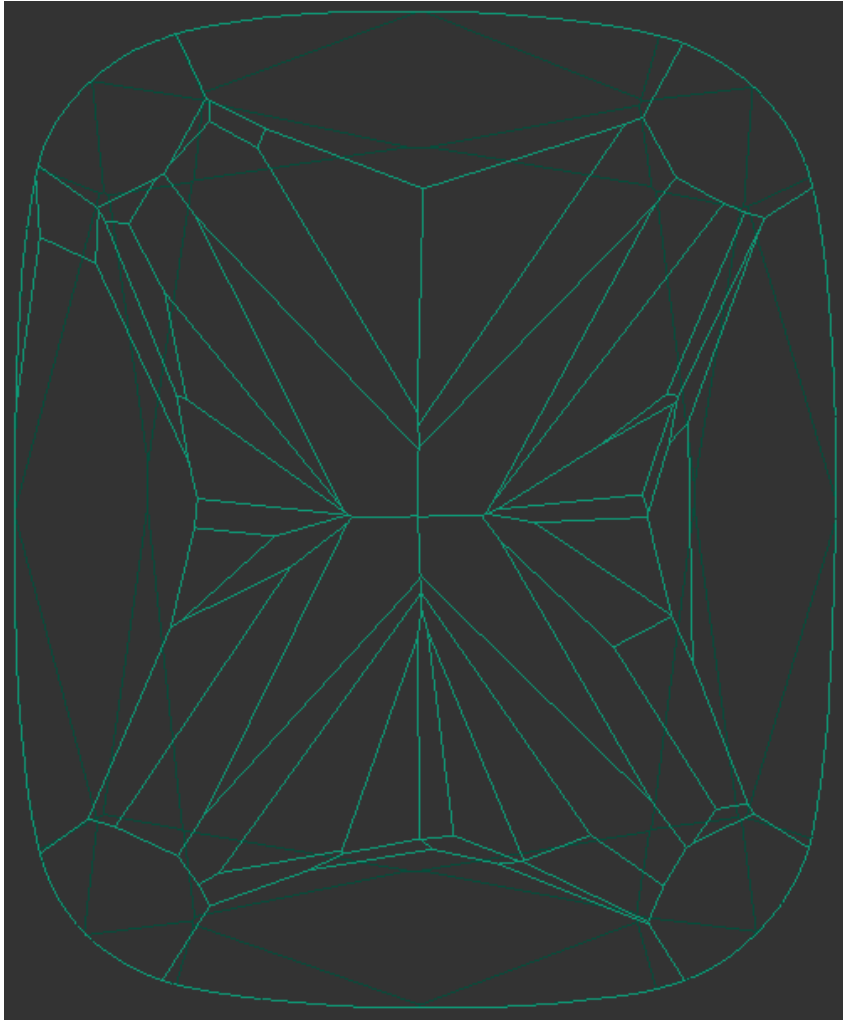
[Pear_Sample21.dmc](#)



Oval_WTB_Sample21.ox2z
Oval_WBT_Sample21.dmc

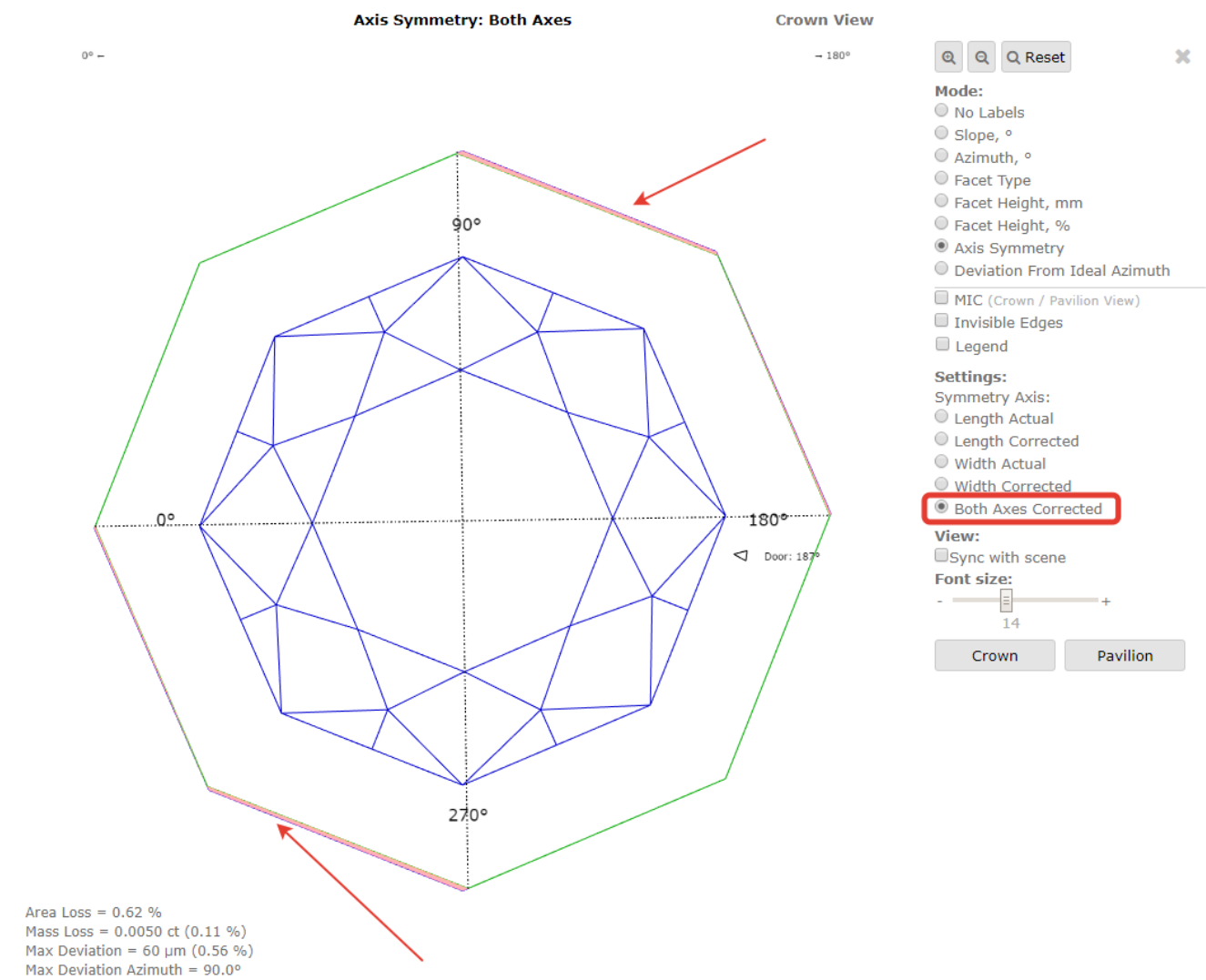


Cushion_Sample21.ox2z
Cushion_Sample21.Dmc



Changes in I3D Report

Implemented red-green fill for "Both axes corrected" mode:



Price list adaptation for Melee diamonds

There is a new 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 $\text{Mass2} \cdot \text{PPC}(\text{Mass2})$

Now

- the cost of diamonds weighing 0.0585ct and above remained the same according to the formula $\text{Mass2} \cdot \text{PPC}(\text{Mass2})$
- the cost of diamonds weighing 0.0585ct and below is determined by the new formula $\text{Mass4} \cdot \text{PPC}(\text{Mass2})$

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

Weight	Mass2	PPC	Old Price	New Mass	New Price
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.

Fixed problems and improvements

- Fixed bug with missing report template "HTML5_Illustrated_report_for_step_cut.html StepCut report template
- Fixed bugs in the algorithm SmartNormalize for Princess cut.
- Appraiser template Goodwin_GoldStar1C1P was renamed into Goodwin_Stars1C1P

Register new cut

Cut name:

EmeraldTest

Selected model contains Facet Types!
[Open Facet Types to adjust](#)

Goodwin

ASCII

Create appraiser for your new cut from selected template (recommended)

AncutBasic
Goodwin1C1P
Goodwin1C2P
Goodwin2C3P
Goodwin_Stars1C1P
Goodwin_Stars1C2P
Goodwin_Stars2C2P

Appraiser for cut 'EmeraldTest' will be created from template Goodwin_Stars1C1P

Ok

Cancel