

PROVAL 3.0 VS 2.7

MAJOR DIFFERENCES IN BEHAVIORS AND FUNCTIONS

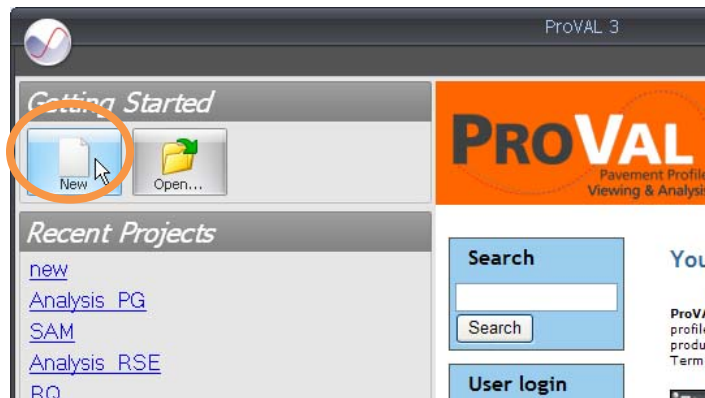
Features	ProVAL 2.7	ProVAL 3.0*
1 File and Project Management	Separated project analysis file (*.pv2) and imported data files (*.ppf) are used to store analysis settings and profile data, respectively.	An all-in-one single compressed file (*.pv3) is used to combine all imported profile data and analysis settings while imported data can be exported.
2 Sections Handling	The features of “point reset” and/or “cropping” tools facilities are used to define and handle a single section of interest. Can only use lead-in and lead-out to define one section of interest.	“Sections” facility in the Editor can be used to define multiple sections of various categories (e.g. generic, exclusions). Therefore, lead-in and lead-outs can be handled more gracefully.
3 Ride Statistics	Separated modules are used for Ride Stats, Ride Stats at Interval, and Ride Stats Continuous analyses. A limit of one file to be analyzed is imposed in the latter two analysis modules.	A single Ride Quality module is used to provide all three types of ride quality analyses. Also, multiple files are allowed to be analyzed for all three analysis types.
4 Input Settings	Input set is used to handle input settings.	An improved analysis template is used to manage input settings.
5 File selection	Users need to manually select files for analysis. Only limited numbers of files are allowed.	A file selector facility is used to speed up files and profiles selection. No limitation on number of file selections!
6 Milepost Display	Mileposts can only be in increasing manner.	Allow display of profile charts in terms of mileposts and in proper increasing or decreasing manner.
7 Charts	Limited functions for chart controls. No charts for fixed interval reports and histograms.	Now all charts come with zooming, scrolling, panning, and zoom history support. Charts also are added for fixed interval reports and histograms. Grinding charts are added to highlight grinding locations.
8 Report	Save reports in HTML format.	Generate reports in secured PDF format.



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1 File and Project Management	Separated project analysis file (*.pv2) and imported data files (*.ppf) are used to store analysis settings and profile data, respectively.	An <u>all-in-one single compressed file</u> (*.pv3) is used to combine all imported profile data and analysis settings while imported data can be exported.

Yes, you will need to start a new ProVAL 3 project file or open an existing ProVAL 3 project file for any analysis. The ProVAL 3 project file names have the same extension, "pv3". The main advantage of using one single file is to avoid losing data files for any analysis.

It is easy to start a new ProVAL file by launching ProVAL 3.0 and use the New speed button, or by clicking any ProVAL compatible file (say, ERD) in Windows explorer. The latter will automatically launch ProVAL and ask you to save the new project to a file.

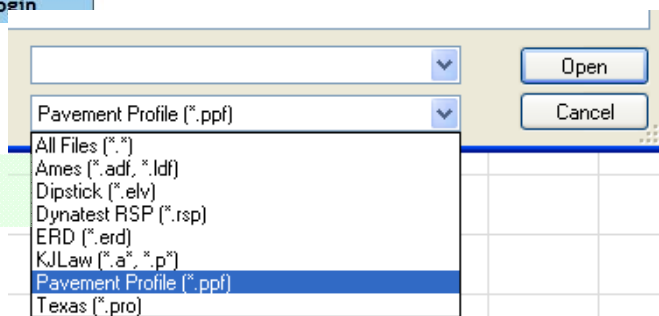


It is even easier to open an existing ProVAL file by launching ProVAL 3.0 and use the Open speed button to select a project. Or, even better, you can simply click any *.pv3 file in Windows explorer and ProVAL will be fired up and loading your file.



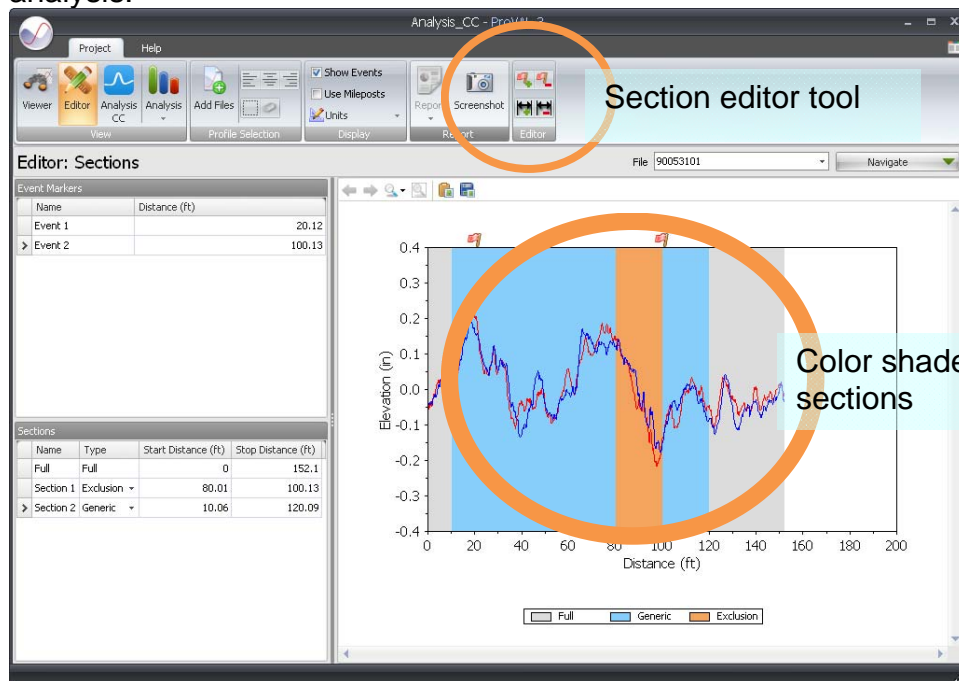
There are many other ways to start/open ProVAL 3 files: e.g. cool drag-&-drop, Most Recent Used (MRU) files, ands etc. See the File and Project Management section of the Users' manual for details.

ProVAL compatible files



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To prepare for future advanced ProVAL analyses, ProVAL 3 has introduced “Sections” definition that can be manipulated in the Editor screen. You can add/define, remove, change, assign “types” to any Sections. In ProVAL 3, the Section feature would replace the “point reset” and “cropping” as in ProVAL 2.7. You can then select a “Section” (likely “full”) in most ProVAL 3 analysis. The previous defined lead-in and lead-out in ProVAL 2.7 would be represented by the “full” section, i.e. excluding lead-in and lead-out. Please note that the lead-in and lead-out portion would be included in the pre-process for the Cross Correlation analysis and similarly for the Profiler Certification analysis.



Though ProVAL 3 Editor can display different sections in different colors, the analyses can only deal with one section at a time. Stay tuned for future upgrades .



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It is just much easier to do ride quality analyses in a single module in ProVAL 3!No matter if it is for the entire trace, fixed interval, or continuous roughness analysis!

All 3 ride index analyses are together now

Start Distance (ft)	Profile: RElev	Profile: LElev	Profile: RElev
116.40	121.70	271.02	
130.40	163.00	133.36	
214.40	226.50	101.24	
226.60	226.80	90.04	
254.10	291.90	199.90	
2,126.40	2,148.80	114.56	
3,206.80	3,230.40	108.08	
3,392.70	3,394.40	92.00	
3,395.80	3,397.50	92.42	
3,403.30	3,404.60	91.45	
3,406.70	3,408.80	93.93	
3,410.10	3,413.10	93.80	
3,414.40	3,417.50	95.99	

Even better, now you can analyze multiple files in one shot! You just need to use the profiler selector... Select profiles when running IRI (one-channel) analysis, or select files for running HRI/MRI/RN (two-channel) analyses.

Also, you will need to select a profile or file as “basis” when producing fixed interval reports as it will serve as the

Designate a “basis” for fixed interval report

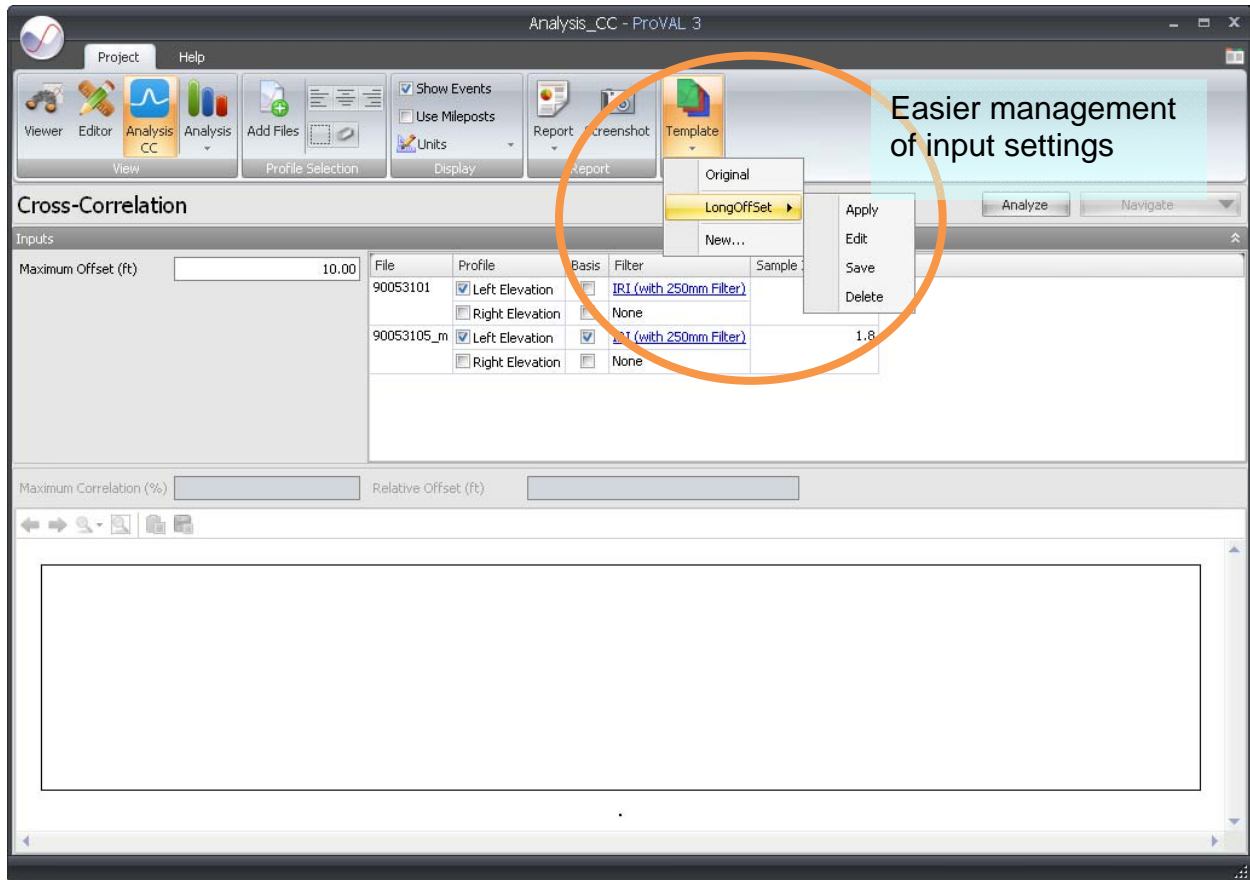
Profile	Basis	Section	Apply 250mm Filter
Profile: LElev	<input checked="" type="checkbox"/>	Full	<input checked="" type="checkbox"/>
Profile: RElev	<input checked="" type="checkbox"/>	Full	<input checked="" type="checkbox"/>

basis for defining segments. All other profiles or files can be reported based on the segment definition of the “basis”. This is just a way to account for odd situations when not all profiles contain the same offsets, etc.



Features	ProVAL 2.7	ProVAL 3.0*
4 Input Settings	Input set is used to handle input settings.	An improved analysis template is used to manage input settings.

In ProVAL 3, a template defines a set of input values for an analysis. A “default” template is provided for each analysis. You can then do whatever you want...create new templates, or set which template is to be the default.

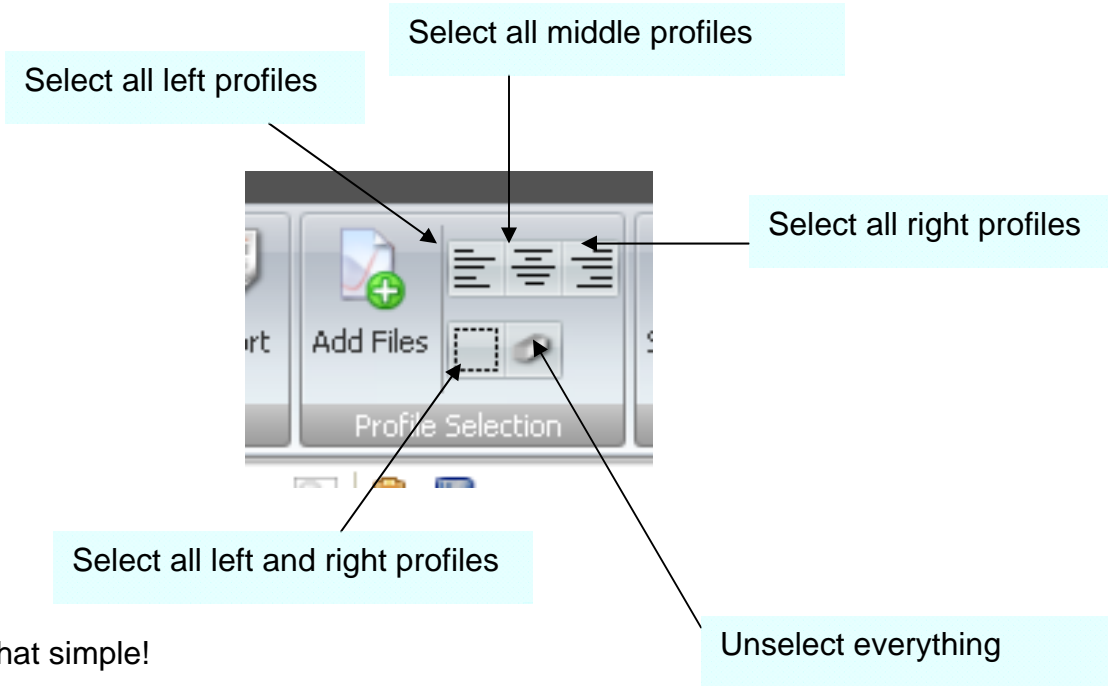
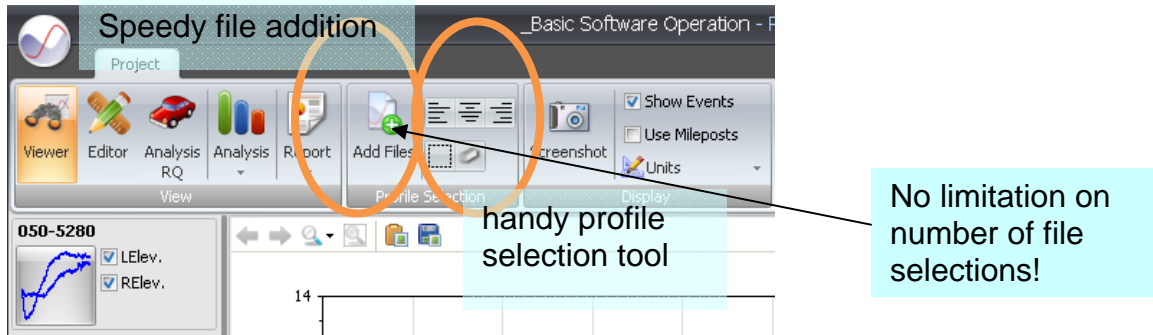


Agencies can take advantage of this feature to define/distribute Templates that match their smoothness specifications. Agency personnel or contractors can import these templates and perform analyses consistently by using the same input settings.



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5 File selection	Users need to manually select files for analysis. Only limited numbers of files are allowed.	A file selector facility is used to speed up files and profiles selection. No limitation on number of file selections!

Adding files to an analysis and profile selection has never been easier in ProVAL 3. Just use the “Add Files” and other speed buttons in the Profile Selection ribbon control!



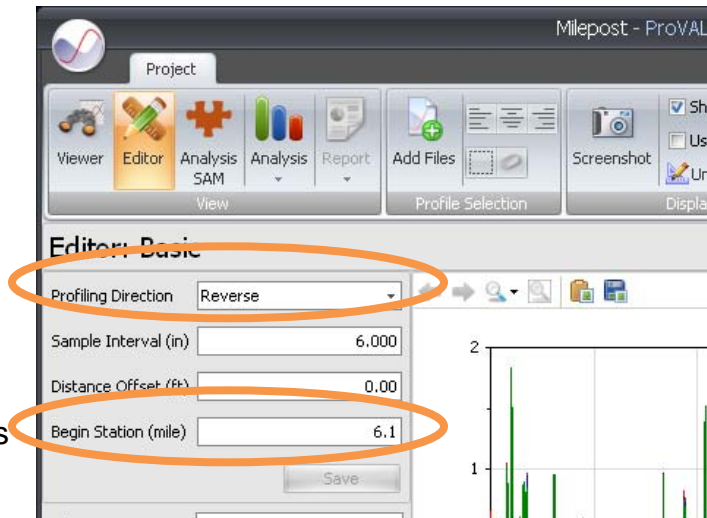
Yeah, it is that simple!



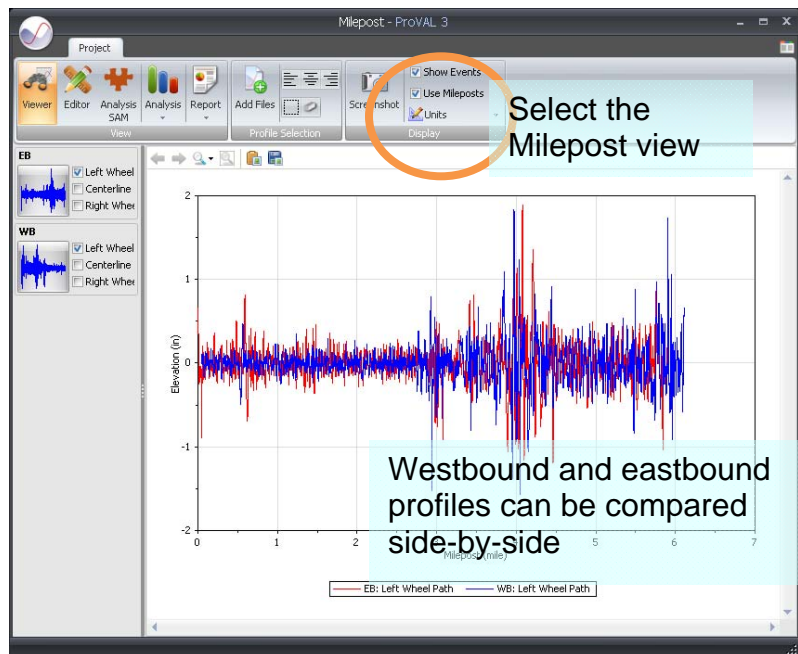
Features	ProVAL 2.7	ProVAL 3.0*
6 Milepost Display	Mileposts can only be in increasing manner.	Users can define starting milepost and direction of travel (increasing or decreasing milepost) of a profile. ProVAL would then allow display of profile charts in terms of mileposts and in proper increasing or decreasing manner.

With a little trick in ProVAL 3, you can easily compare multiple files that are surveyed in different directions, in increasing or decreasing milepost for example. The key is to define the Profile Direction and Beginning Station in the Editor/Basic screen.

You should avoid using Distance Offset along with the Begin Station though. The former is normally used to account for differences in triggering. The latter is used for designation of the milepost at the beginning of the profile – no matter what direction it is in during survey.

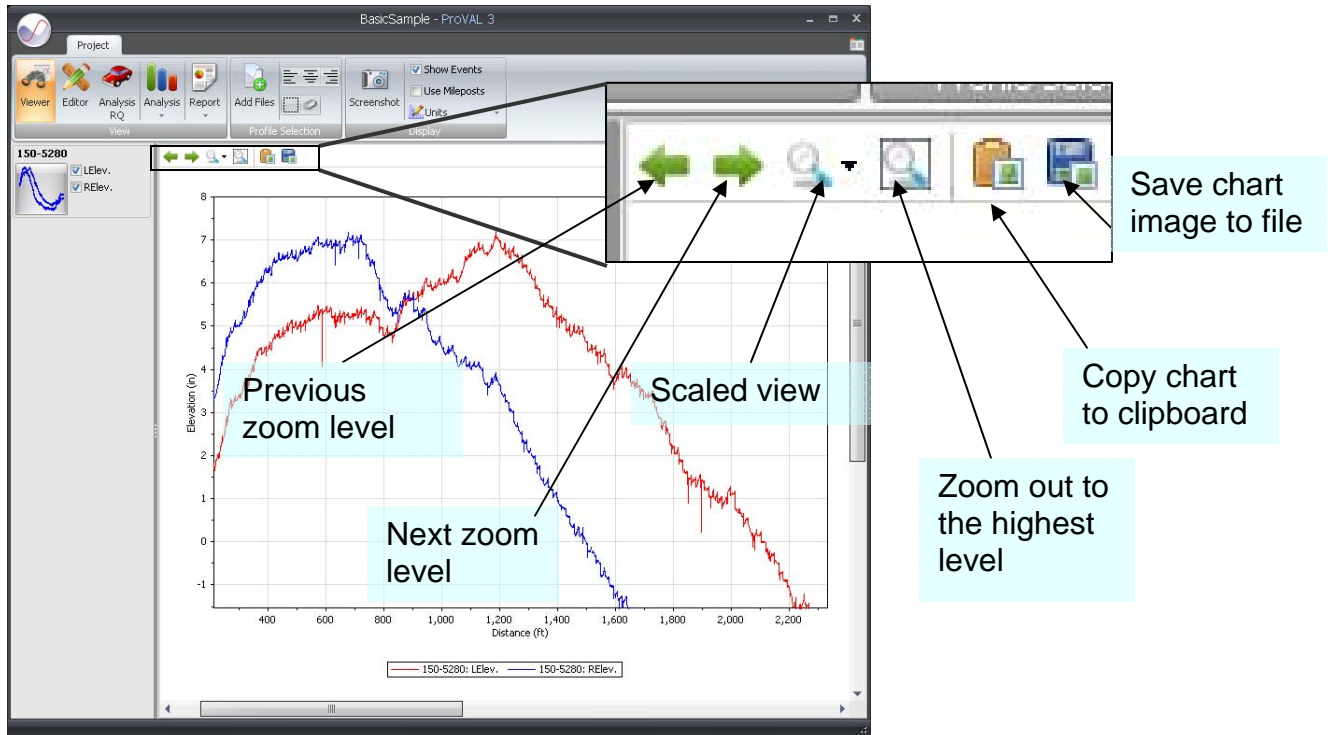


Due to the difference between profiler travel and straight line distance between milepost, you should avoid using the milepost view in analyses such as finding grinding locations in Smoothness Assurance.

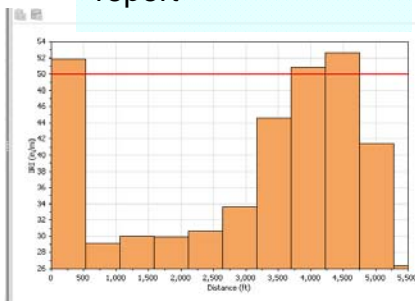


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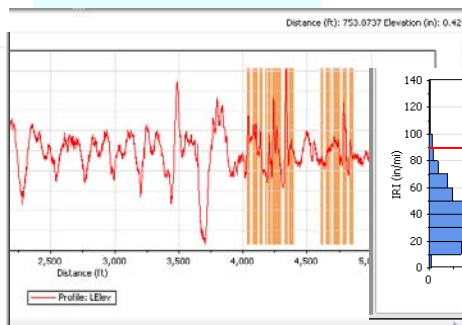
In ProVAL 3, all charts come with powerful zooming (forward/backward), scrolling, panning (using the right mouse button), zoom history support (yes, it remembers all zoom levels that you did before), scaled view (say, 0.1 mile view window), chart images saving. These controls allow users to efficiently identify profile features.



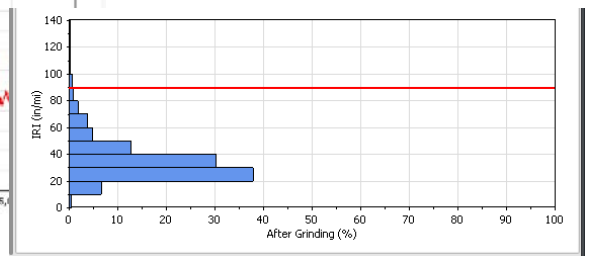
Bar chart of fixed interval roughness report



Grind locations



Histogram of continuous roughness report



Features	ProVAL 2.7	ProVAL 3.0*
8 Report	Save reports in HTML format.	Generate reports in secured PDF format.

Now this is what many users (esp. agencies) has been asking for.... ProVAL reports in “secured” PDF. Starting ProVAL 3, there is a built-in PDF report writer to generate secured reports that can not be modified.

1 Do the analysis

2 Click the report button

3 Huala! A secured PDF report!

As Easy as 1-2-3!

Any questions?

- ▶ Check out the ProVAL 3 Users' Manual
- ▶ Visit the ProVAL website www.RoadProfile.com
- ▶ Contact us: info@RoadProfile.com

Analysis: Profiler Certification

Inputs
Maximum Offset (ft): 5.00
Minimum Repeatability (%): 92.0
Minimum Accuracy (%): 90.0
Basis Filter: IRI (with 250mm Filter)
Comparison Filter: IRI (with 250mm Filter)

Selections

File	Profiles	Basis	Run	Sample Interval
asphalt1	Left + Right	No	1	1.2
asphalt2	Left + Right	No	2	1.2
asphalt3	Left + Right	No	3	1.2
asphalt4	Left + Right	No	4	1.2
asphalt5	Left + Right	No	5	1.2
Wk_BIT1	Left + Right	Yes	0	9.5

Results

Accuracy (%)

Run	Left	Right
1	91	92
2	91	92
3	90	93
4	92	93
5	91	94

Statistics

Statistic	Repeatability - Left	Repeatability - Right	Accuracy - Left	Accuracy - Right
Comparison Count	10	10	5	5
% Passing	100	100	100	100
Mean	98	99	91	93
Minimum	98	98	90	92
Maximum	99	99	92	94
Standard Deviation	0.5	0.3	0.7	0.7
Grade	Passed	Passed	Passed	Passed

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