Profile Viewing and Analysis Software

What is ProVAL?

ProVAL (Profile Viewing and AnaLysis) is an engineering software application that allows users to view and analyze pavement profiles in many different ways. It is easy to use and yet powerful to perform many kinds of profile analyses. ProVAL is a product sponsored by the US Department of Transportation, Federal Highway Administration (FHWA) and the Long Term Pavement Performance Program (LTPP).

What does ProVAL do?

Users can import profiles from various file formats and save them in the Pavement Profile standard file type. Entire analysis projects can be saved, which preserves user information and analysis inputs. After analyses have been performed, the user can print a report of the original profiles and the results of any analyses performed. ProVAL has been adopted by many agencies around the world.

What types of analyses can ProVAL perform?

Profile Editing: manipulate profile data in many aspects including cropping and filtering;
Ride Statistics: report ride indexes such as International Roughness Index (IRI), Half-car Roughness Index (HRI), Mean Roughness Index (MRI), and Ride Number (RN); the report types include full, fixed interval, and continuous;
Power Spectral Density (PSD): analyze the wavelength or frequency contents of profiles;
Profilograph Simulation: simulate Profilograph traces, report Profilograph Indices, etc;
Rolling Straightedge Simulation: simulate Rolling Straightedge traces;
Profile Synchronization: synchronize profiles and determine their repeatability/accuracy based on cross correlation;
Profiler Certification: produce repeatability tests and accuracy tests for profiler certification programs;

Precision and Bias: classify profilers based on the ASTM E950 standard;
Smoothness Assurance Module (SAM): provide ride quality reports and improve smoothness from pavement grinding simulation.
Automated Fault Measurement (AFM): automatically identify joint locations and estimate joint faulting from profile data;
Optimal WIM Locator (OWL): evaluate Weight-in-Motion measurement errors based on profile data.

What is the pavement profile standard file format that ProVAL uses?

The Pavement Profile Standard File format (filename extension "ppf") is a binary-based file format created for ProVAL. It is efficient, portable, stable, and upgradeable. The ASTM International profile data file specification, E2560, is based on this format.

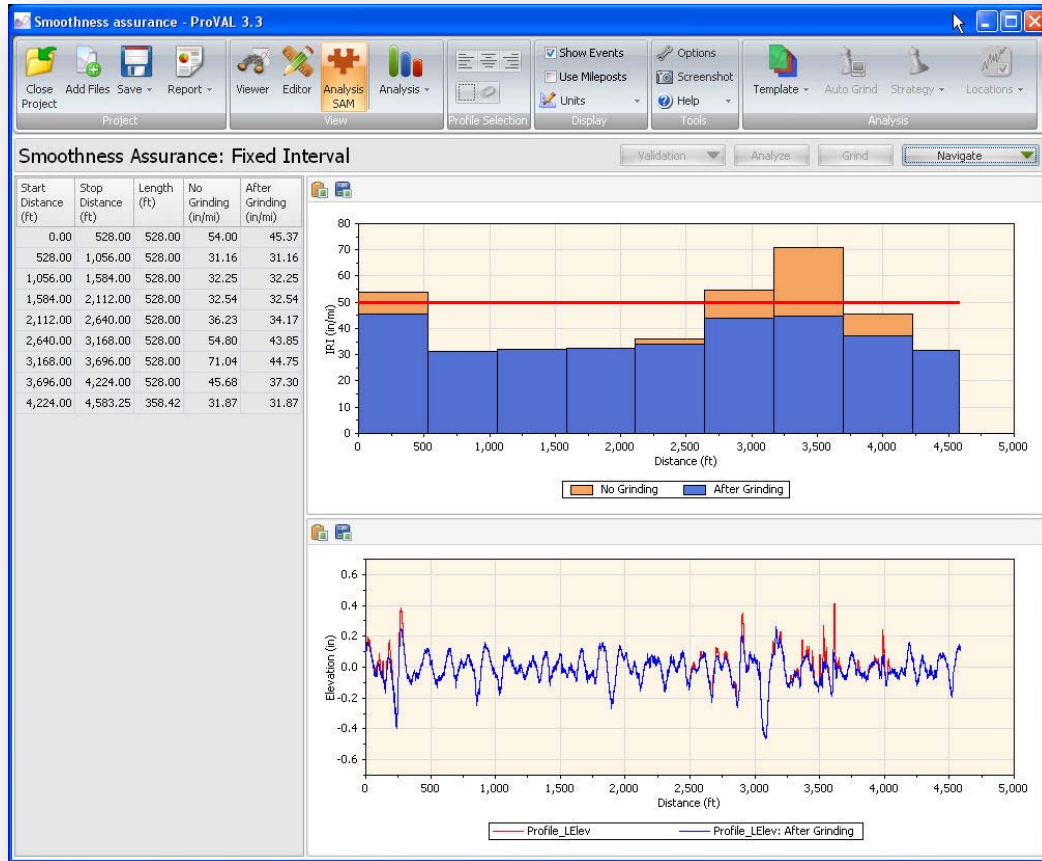## Can I import other file formats into ProVAL?

Yes! You can import the following files: UMTRI (.erd, .bin); TxDOT (.txt, .dat, .pro); KJ Law (.a*, .p*); Dynatest (.rsp), and Ames (.ldf, .adf). Once you save a "project" in ProVAL, the imported files will be automatically converted to the ppf format. The converted files are usually much more compact and efficient than the old formats, especially when the old formats are in text (ASCII).

Where can I get ProVAL?

You can easily download the latest ProVAL from www.RoadProfile.com! This website contains all update information about ProVAL.

What is the current version of ProVAL?

The current version of ProVAL is 3.61. Updates are posted on the ProVAL website as needed. Continuous development and improvement of ProVAL is underway.

How can I get technical support?
There are different ways to get help with ProVAL: Online Documentation, Online Forum, Email/Phone, Technical Documents, and Issue/Feedback Reports. Check out the ProVAL website Support page for details.

When and where are the ProVAL workshops?

We conduct workshops around the world. As features in ProVAL continue to be added or enhanced via various upgrades, and as the software is increasingly used by agencies and contractors, there is an increasing need for customized ProVAL workshops that provide training for various levels of users. We therefore offer workshops which focus on:

- Familiarizing users with the current version of ProVAL,
- Refreshing users with key fundamentals of profiling and analysis methods,
- Sharing knowledge on the advantages, limitations, and pitfalls related to analyzing and interpreting pavement profiles, and

- Providing an interactive and hands-on approach to learning ProVAL.

Where can I get more Information?
You may contact the Federal Highway Administration COTR or the Transtec Group for more information about ProVAL:

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