Case Study

Online Test Monitoring System
Created by PDC internet solutions and StatSoft Ltd for CEC, using WebSTATISTICA software

About CEC

CEC is the European Fuels and Lubricants Performance Test Development Organisation. CEC Test Methods are used extensively by the automotive and petroleum industries in Europe and throughout the world. CEC develops Test Methods for the performance testing of Automotive Engine Oil, Fuels & Transmission Fluids. They can be engine or rig or bench tests. It maintains tests methods on an ongoing basis, concentrating on quality and maintaining confidentiality amongst Stakeholders.

CEC is based in Brussels and its administration is handled from the UK.

Laboratories have to achieve an internationally recognised Quality Management System for each test, like ISO 9001, as well as ISO 17025 (this is not mandatory for bench tests). They have to run reference tests in accordance with the Test Method and input their reference results into a specified Test Monitoring System. Data quality is monitored by the CEC Statistical Development Group who worked with PDC internet solutions to ensure that the Test Monitoring System met CEC's requirements.

Online Test Monitoring System (TMS)

An online system was adopted for monitoring CEC tests. The new CEC–TMS system, created by PDC internet solutions with help from StatSoft, was introduced in 2008, making it easy to quickly capture and analyse reference test data and to maintain test quality. WebSTATISTICA is used to create statistical charts. Reference test results are recorded on a continuous basis rather than the traditional manual 'round robin' approach. Members can display, analyse and compare reference test results in graphic format across all key test parameters, making this a powerful tool for monitoring test quality and spotting data trends.

Example of a Discrimination chart produced by the application
The Project – Online Test Monitoring System

PDC internet solutions was commissioned by CEC to produce the online test monitoring system. CEC and PDC internet solutions selected Web STATISTICA as the primary solution for generating the complex statistical charts that were needed. The UK office of StatSoft worked with PDC internet solutions to build the interface, which enables data to be passed from the TMS to Web STATISTICA for charting. Users can select plots including test parameters, labs, instruments, reference fluids and batches over a given time period.

PDC internet solutions project—managed the TMS system which had to be delivered in the shortest possible time frame, consistent with achieving a functional, reliable and technically accurate result. As partners in the project CEC, PDC internet solutions and StatSoft produced a reliable system on—time and on—budget. The software implemented by PDC internet solutions and StatSoft has proven to be robust and reliable.

Using Web STATISTICA, the system allows complex statistical plots to be produced for a variety of parameters and tests, including:

- Control charts with bias, warning and control limits and overlaid EWMA trends
- Discrimination charts
- X—Y plots

PDC internet solutions designed the TMS Extranet. The simple interface is easy—to—use for users for whom English is not their first language. The navigation is simple and intuitive. Access is controlled by username and password, and users can only access the tests for which they are uploading data.

About PDC Internet Solutions

PDC internet solutions is a UK—based consultancy offering Internet solutions and management services. Based in Market Bosworth in Leicestershire, PDC internet solutions was founded in 1999. Our people are fully trained in—house and are professionally qualified. PDC internet solutions’ customers range from major blue—chip multi—nationals, through Europe—wide organisations, to regional small and medium—sized companies and knowledge transfer networks. We specialise in the research, engineering and vehicle sectors.

PDC internet solutions provides Internet, intranet, and extranet design, content management, search—engine promotion, hosting, email and archiving services. We also provide project administration and general management consultancy. This can range from web site maintenance, to organising diaries and meetings, publishing minutes and procedures, and also liaising with people at a senior level.
About StatSoft

StatSoft, Inc. was founded in 1984 and is now one of the largest global providers of analytic software worldwide. StatSoft is also the largest manufacturer of enterprise—wide quality control and improvement software systems in the world, and the only company capable of supporting its QC products worldwide, with wholly owned subsidiaries in all major markets (StatSoft has 23 full—service offices, on all continents), and its software is available in more than 10 languages.

StatSoft Ltd is the UK and Ireland branch of StatSoft Inc offering STATISTICA product line sales, technical support, statistical training and custom development services. StatSoft Ltd consultants have successfully deployed analytical systems based on STATISTICA software for some of the world’s largest companies and institutions.

Example of a Control chart produced by the application

Paul Bromby, Managing Director of PDC internet solutions said “Working as a team with CEC and Statsoft UK, PDC internet solutions has produced an online test monitoring system which is both powerful and robust. We appreciate the support of the CEC Chairman, Secretariat and Statistical experts in executing the project, and of Statsoft UK’s technical expertise in producing a statistical charting system that meets CEC’s precise and complex requirements”.

‘Working with PDC was a real pleasure. Their professional project management, clear focus on business objectives and down—to—earth approach was crucial in hitting the tight project targets. Our WebSTATISTICA technology perfectly complemented PDC internet solutions ASP—based interface and database architecture.’ Matt Coates, Project Leader StatSoft UK Ltd