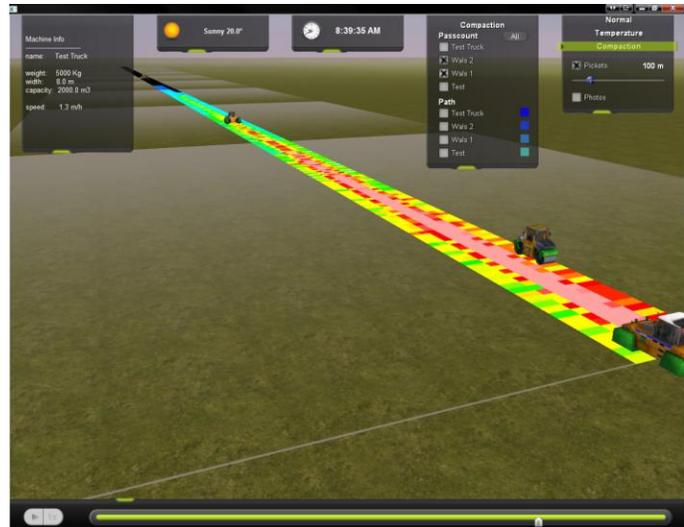


## ASPARi and TXChange launch the first version of ProPave

Enschede, The Netherlands - 9 November 2009 - TXChange programmer/developer, Thomas de Groot, today handed over the first version of the newly developed tool aptly named ProPave to ASPARi researcher Seirgei Miller. TXChange and ASPARi jointly developed this visualization tool as part of ongoing ASPARi research efforts to improve the Hot Mix Asphalt (HMA) paving and compaction processes. The ProPave version 1.0 is already quite impressive. Over the next year ProPave will be improved and new functions will be added.

“We use Quest 3D as a platform to visualize HMA data collected by the ASPARi research team,” says, Thomas de Groot. “The tool uses large amounts of logged data to visualise a representation of the actual work done during paving and compaction. Not only are the positions of the machines visualised, also the weather and initial temperature of the asphalt are shown. Furthermore, all kinds of derivative information are available in the tool. The tool offers a great base for further development in real-time GPS tracking and Augmented Reality for the operators. This first version is the culmination of four months of development work, meetings and testing using data collected from a number of HMA construction projects.”



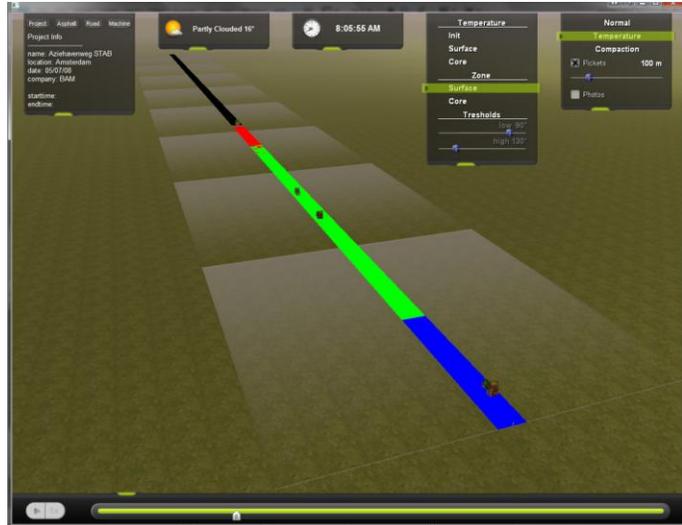
ASPARi researcher Seirgei Miller adds “This tool builds on our experiences in making operational behaviour explicit during the HMA process. In the first phase of our research, we developed a data collection method and developed several graphical methods of showing the results of operational behaviour. We used Temperature Contour Plots, Compaction Contour Plots and 2D animations to show



the results of current work methods and strategies. However, our first attempts to transform the collected to visualization was rather cumbersome. We used various software tools to develop the graphics including Matlab, Excel and Visual Basic. I even attended a course in the USA to get accustomed to the XYZ-solutions software. Since the latter was not suitable for our purpose, we abandoned that route and contacted TXChange. In 4 months, the new tool was developed, tested and put to use. Whilst there is still a need to pre-process the

data, the ProPave tool visualizes HMA temperature and compaction in a realistic three dimensional world. ProPave brings in the time dimension of HMA paving, cooling and actual compaction activities, and allows the HMA construction teams to visualize paving and compaction activities as they unfolded on the construction site.”

The HMA process is one that is based on tradition and custom. Previously, it has been difficult to visualise the process in a manner conducive to the operators learning from, and their understanding of the process and the factors influencing the process. New technologies, including GPS, infrared cameras and laser line scanners, make it possible to capture what operators do during the HMA process. These technologies coupled with current computer technology, make it possible to develop visualisations that makes HMA operational behaviour explicit and provides several opportunities for learning and process improvement.



For further information: [www.aspari.nl](http://www.aspari.nl) & [S.R.Miller@ctw.utwente.nl](mailto:S.R.Miller@ctw.utwente.nl) ; [T-Xchange](http://T-Xchange) & Thomas de Groot

For more images and a video impression, visit the T-Xchange website: [www.txchange.nl/aspari](http://www.txchange.nl/aspari).