FRANZ INC.

Allegro CL®

Success Story

PEPITO® – a Unique Decision-Making application for large databases

PEPITe S.A. (www.pepite.be) develops a Data Mining solution to analyze complex processes by analyzing the data they generate. PEPITe's solution enables decision-makers to understand the past, diagnose the present, and anticipate the future of their business in order to manage it effectively and improve its profitability.

Founded in September 2002, PEPITe originates from the Machine Learning Laboratory of Professor Louis Wehenkel at the University of Liege, Belgium. PEPITe licenses its software and provides consulting services to companies in need of business improvements through data analysis. They focus on the energy, manufacturing and biotech sectors, with customers such as Hydro-Québec, Arcelor, Alstom T&D, and Goodyear.
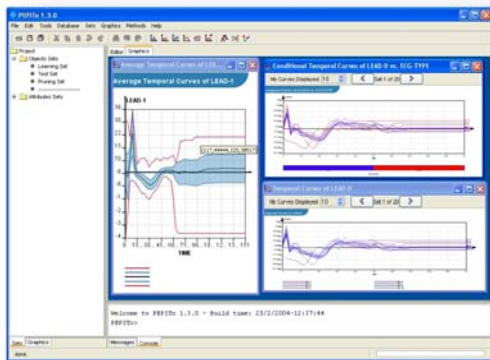
Temporal Analysis

PEPITo, is a unique combination of visualization, statistics and predictive tools that can be applied to large databases (millions of objects characterized by thousands of parameters each). It features a simple and intuitive user interface that hides the complexity of the data mining tasks from average users, enabling them to easily focus on the results instead of the methods. However, PEPITo also possesses a powerful scripting language (KDLisp) that enables experts to control every aspect of the data mining process and perform complex tasks.
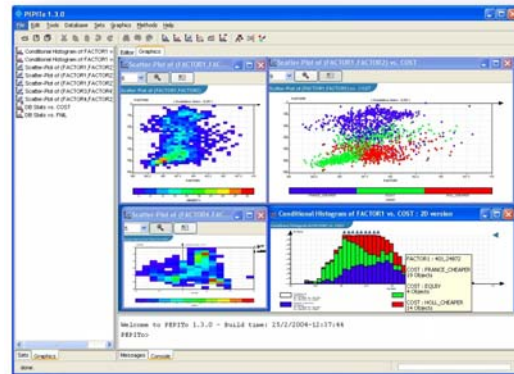

Statistical Analysis

The Lisp console gives the user the entire control of the application, without having to learn any obscure and limited scripting language. The user just needs to have some basic Lisp knowledge, and our KDLisp reference manual comes in very handy,"

**Laurent Eschenauer**
Senior R&D Engineer

PEPITo shares many characteristics with competing products (SAS Enterprise Miner, SPSS, IBM Intelligent Miner), but what makes it truly unique is the toolbox aspect that enables PEPITe to develop specific applications for a customer or a market. Explains PEPITe's lead R&D engineer, Laurent Eschenauer, "Whenever we develop a simple web interface, or embed the knowledge engine on a real-time fault detection system, we use the same components of the PEPITo toolbox, allowing us to build a solution that integrates seamlessly within the business, and the IT infrastructure of our customers."
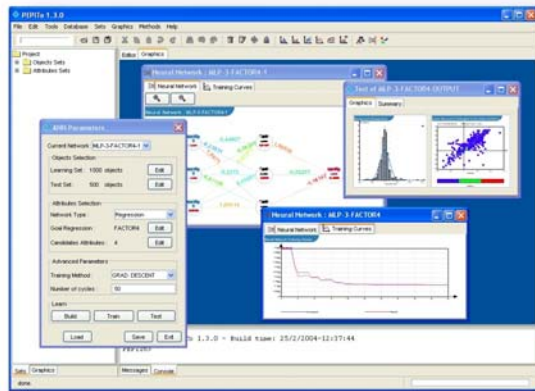
Artificial Neural Network

Lisp as a key component of our architecture

PEPITe acquired the software in September 2002, it was written in Lisp, and running on Allegro CL on Linux. For Laurent Eschenauer and his team, the first goal was to port the application from Linux to Windows. "It took us less than a week to do the porting, it could have been done in a day if we didn't have problems with some foreign library written in C!" said Laurent. They were also able to develop a lightweight user-interface in JAVA that connects to the Lisp Data Mining Server using CORBA. "Finally, we added various drivers required by our customers, This was straightforward since Allegro CL fully supports MySQL, ODBC, and OLE," added Eschenauer.
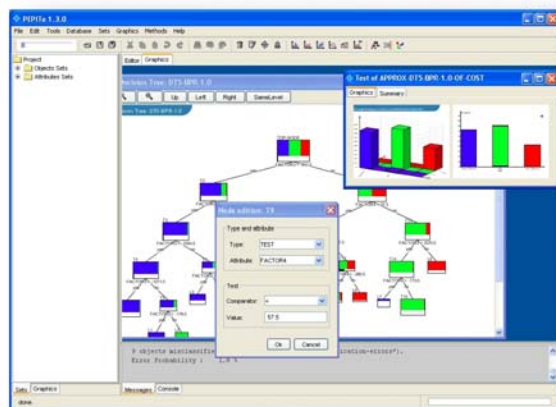
Induction Trees

For the R&D team, there is no doubt that PEPITo is unique because of its Lisp kernel.

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Shaping up the future

The future of the software industry is in free software. Not "free as in beer" but "free as in freedom". The freedom for the user to control, modify, and adapt the software to its needs and environment. This freedom enables the user to get the most out of their software and therefore maximize their return on investment. With most programming language, achieving this freedom requires the software to be open-source, which can lead to a dissemination of the key knowledge behind the application and therefore to a defective business model.

"This is not the case in Lisp where freedom is achieved at no cost. When a customer buys PEPITo, they don't receive a monolithic application but a whole programming environment that is the application," said Eschenauer. As long as functions are properly documented, they can develop new tools inside the environment using the existing blocks. This set of functions defines an extension to the Lisp that can be used by the user to control, modify and adapt the software. PEPITo also uses this capability to extend the Lisp language to create the Knowledge Discovery Lisp (KDLisp).

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