

Cassantec Prognostics – a New Way of Making Decisions

The Big-Data-Start-Up Prognosticates Future Events with Stochastic Data Analysis

We often make decisions that relate to the future. For example, we expect that our car will make it through the planned weekend journey. Or the patient with a pacemaker schedules the next appointment with his cardiologist in six months after the summer holidays. In the industrial sector, future maintenance is planned in advance for the entire year.

Such decisions can be improved through Prognostics, because the currently used information is not oriented towards the future, it is not prognostic. The driver of the car, for example, relies on last month's inspection, and the patient on the fact that the next routine examination would be in autumn anyway.

Operators of industrial equipment usually plan their maintenance schedules in regular intervals, based on manufacturer instructions enhanced by past experience. This costs millions every year. Previous attempts at addressing this problem are not sufficient, even if they are regarded as highly advanced. For example, Predictive Diagnostics helps identify early warnings for future equipment malfunctions. However, critical information is missing: When will the time window close, during which the impending malfunction can be avoided?

Cassantec GmbH and its management team consisting of Moritz von Plate, CEO, and Dr. Frank Kirschnick, founder and CTO, have the solution. Advanced algorithms prognosticate the timing of events, hence also when the time window for possible countermeasures closes. With that information in hand, maintenance plans can be optimised and, for example by replacing parts before they develop a malfunction, unnecessary costs or unplanned downtimes avoided.

Since the forecasts are individually calculated for every component, they are not based on fleet averages or on outside information from the manufacturer. The advantage of this is that the prognosis incorporates the individual performance curve, the operational strategy and, if applicable but not necessarily, earlier incidents. The gist is that the prognosis will reach a higher level of accuracy and reliability. When calculating the prognosis, the historical and current data run through a number of steps. These consist of stochastic methods and highly developed algorithms. The result is an explicit risk profile illustrating the likelihood of malfunctions over an explicit future time horizon.

"With our efficient configuration process and the highly scalable Prognostic Reports, we deliver enormous economic advantages to companies: equipment downtime can be

minimised and the Remaining Useful Life of the equipment actively managed“, explains Moritz von Plate, CEO of Cassantec GmbH.

Several customers are already prognosticators. Utilities, railway operators, and oil and gas companies have recognised the benefits of Cassantec for their equipment. In addition to Cassantec’s main pillar in the industrial sector, the company is engaging with customers and partners from the automotive and health sectors, for example for pacemakers or artificial hearts.

Cassantec will present Prognostics during this year’s Hannover Messe from April 13 to 17. As part of the joint booth of the Bundesministerium für Wirtschaft und Energie (BMWi) „Junge innovative Unternehmen Energy“ Cassantec specifically demonstrates the application of Prognostics in the energy sector.

More information is available at www.cassantec.com

About Cassantec

Founded as a public limited company in Zurich in 2007, Cassantec and its German subsidiary are specialised in providing customers with highly advanced prognostic solutions. With offices in Zurich, Berlin and Cleveland/USA the company delivers precise forecasts about the condition of equipment and components. Based on such forecasts the operators can derive optimal courses of action. With its prognostic approach the company distinguishes itself from other established monitoring and diagnostic service providers. Cassantec Prognostics is based on new and unique combinations of mathematical methods. They determine condition trends, risk profiles of malfunctions and the Remaining Useful Life of a broad range of machines and equipment. The company can provide references from the power, oil and gas, and process industries and the transport sector. Cassantec is promoted by the Swiss Commission for Technology and Innovation (CTI) for its innovative prognostic solution and cooperates with leading universities and industry partners. The name Cassantec (which is an abbreviation of Cassandra Technologies) refers to the figure of Cassandra in Greek mythology who warns of impending dangers.