KPIT Cummins Infosystems

www.kpitcummins.com

Year of Incorporation: 1985

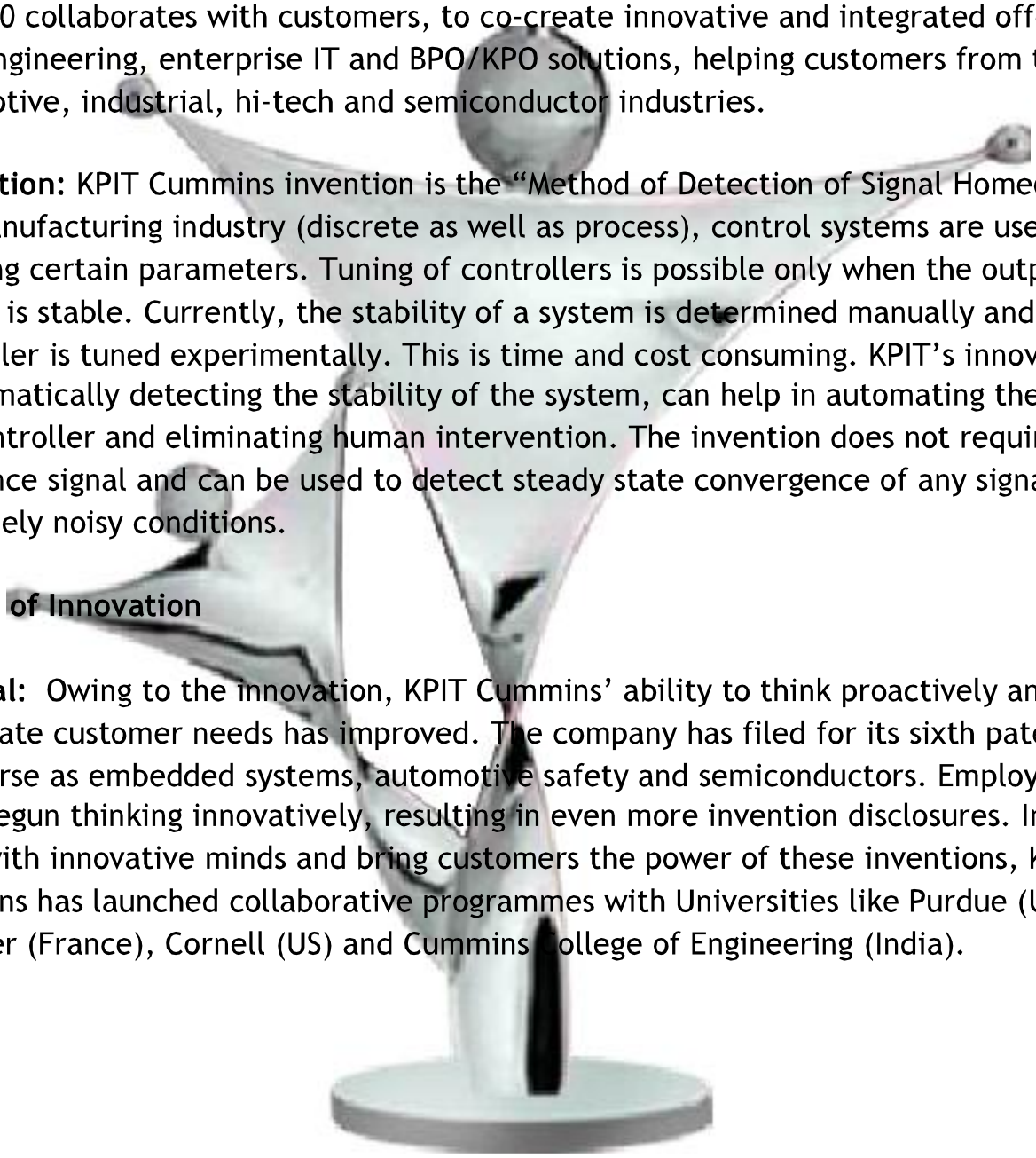
Category of Innovation: New Technology Advancement

Company overview: KPIT Cummins partners with global manufacturing corporations, in bringing products faster to target markets, and globalising processes and systems, with its unique blend of domain-intensive technology and process expertise. KPIT's strong workforce of 5,000 collaborates with customers, to co-create innovative and integrated offerings that span engineering, enterprise IT and BPO/KPO solutions, helping customers from the automotive, industrial, hi-tech and semiconductor industries.

Innovation: KPIT Cummins invention is the "Method of Detection of Signal Homeostasis." In any manufacturing industry (discrete as well as process), control systems are used for handling certain parameters. Tuning of controllers is possible only when the output of the system is stable. Currently, the stability of a system is determined manually and the controller is tuned experimentally. This is time and cost consuming. KPIT's innovation, by mathematically detecting the stability of the system, can help in automating the tuning of the controller and eliminating human intervention. The invention does not require any reference signal and can be used to detect steady state convergence of any signal, even in extremely noisy conditions.

Impact of Innovation

Internal: Owing to the innovation, KPIT Cummins' ability to think proactively and anticipate customer needs has improved. The company has filed for its sixth patent in areas as diverse as embedded systems, automotive safety and semiconductors. Employees too have begun thinking innovatively, resulting in even more invention disclosures. In order to work with innovative minds and bring customers the power of these inventions, KPIT Cummins has launched collaborative programmes with Universities like Purdue (US), Paul Sabatier (France), Cornell (US) and Cummins College of Engineering (India).



External: One of the major applications of this invention is in the area of O2 sensor and feedback control systems. This invention will help reduce emissions and thereby meet stringent emission control standards. The O2 Sensor is normally activated in three minutes after starting of a car. With the help of this innovation, this time can be reduced to one minute. This is expected to result in a drop in emissions during the time of starting the car, thereby resulting in far reaching consequences on the environment.