

Integrated, real time, proactive, web-based process evaluation software solution for yield/productivity improvement, profit increase and defect/cost reduction

According to industry experts, software and ERP software solutions companies are solving today's complex business problems, but still lack the ability for customers to leverage the associated data. Visual analytics give customers the ability to ask the unknowns, uncover hidden problems, gain new insights, and react to changing business conditions – getting even more value from the software! Furthermore, companies who adopt visual analytics are more competitive while delivering information to their customers.

It is obvious that every business is comprised of diverse processes. Each process, in turn, generates enormous amounts of metrology data, which can be collected and analyzed for further process improvements. Due to natural fluctuations, a process, as a set of conditions described by various qualities and characteristics, ought to be adjusted to stay under control and keep up with business requirements.

These complex scientific methods of analyzing data are used to solve practical problems. Those can be applied to anything that it is possible to express in the form of numbers. While being universal those process evaluation techniques are lagging a growing pace of the economy and industrial requirements, leaving certain process areas obscure.

It is a common practice when process evaluation procedures are often problem-driven or scheduled and cumbersome to execute. It usually requires disparate groups of people to gather raw data from multiple sources. Other engineers create charts and analyze the information that helps assess process behavior. A group of decision makers interprets process problems and determines remedy measures. Often due to problem-urged situations and irregular data sampling techniques it is always hard to quickly detect, identify and resolve a root cause for process malfunctioning. Overall, it takes considerable amount of time to diagnose and repair a problem. (Meantime product losses may grow while yield/profits continue to decrease.) One of the biggest challenges every business faces is a clear understanding of its progress dynamics prior to a scheduled (or urgent) data analysis.

SPMT Systems (www.spmt-systems.com) has developed a generic software approach, which simplifies and speeds up typical process assessment procedures. This approach combines required process evaluation steps and logistics into a single package. Its main mission is to collect process-generated data, thoroughly analyze it, then create and deliver a set of essential SPC charts and reports to end users "real time" over the Internet with no human effort.

The solution is a server-centric, zero-client, fully automated Analytics-as-a-Service (AaaS) system. The core of this Business Intelligence (BI) system is designed to support a continuous time interval-overlapping data retrieval concept. Through elimination of information gaps and usage of web technologies, the system delivers real time visual displays of the quantitative analytical intelligence over the Internet. It is a loosely-ended system requiring the integration with a customer domain for raw data acquisition. The system operates with an abstracted database schema, designed for its utmost efficiency. It is comprised of the major components that contain customer ETL modules and database, and common mathematical and graphical engines. Other system built-in features include authentication, encryption, security layers, and automated system administration modules.

This BI solution serves as an early-warning tool helping accelerate decision-making procedures. At each refresh cycle, the system recalculates statistical graphs and instantly ascertains process faulty areas. It informs a user community about detected problems helping apply corrective actions to loss reduction and yields increase. The system can monitor both successive and parallel processes within ongoing business activities. It enables all levels of personnel to quickly assess/diagnose/alter process behavior at any time. It helps observe/manage remote operations. This system also helps boost product pilot lines, improve Manufacturing Execution System (MES) areas, and more accurately plan/forecast production.

The Systematic Process Monitoring Techniques (a.k.a. SPMT) ensures that users can achieve the highest product yield and loss reduction and improve profitability. The SPMT solution delivers the following benefits:

- Provides real time process performance monitoring through visual displays of the quantitative analytical information via the Internet.
- Helps increase process yield/throughput, reduce losses, enhance profitability, and boost productivity.
- Eliminates informational gaps by using a time-overlapping concept in generating charts and periodic reports.
- Provides company-wide operational visibility and accelerates decision-making procedures.
- Improves communications and operational efficiency due to proactive enterprise-wide status reporting.
- Maintains consistent, time-sensitive process information across the enterprise including remote sites.
- Reduces time for correlating defects to yield loss and disposition of low-yield lots.
- Improves production by accurate assessing and controlling multiple processes.
- Frees personnel from data collection/charting/report preparations.
- Helps improve product quality as well as customer satisfaction and relationship.
- Handles system self-administration through built-in automated mechanisms.

SPMT offers a paradigm shift within the enterprise process management. The deployed SPMT solutions immediately generate ROI through product yield/profit increase and reduction of operational costs and losses. The system is scalable and extensible that may further enhance long-term gains and customer acceptance, broadening a potential for market penetration. SPMT expects that its software offerings can greatly enhance business intelligence product line of any company and widen market dominance. The following link www.spmt-systems.com/docs/pet.pdf briefly outlines major system features and current market landscape compared with the similar leading products.

The offering is ready for full deployment and beta test within the next few calendar months upon receipt of additional funding to add the needed staff, build the product launch infrastructure and develop market awareness. SPMT is also interested entering the market through exploiting positioning with the right partner.