2D and 3D cameras systems

System for development, simulation and testing knowledge systems

A system supporting the development and implementation of knowledge applications that use the concept of semantics modeling and data processing, including support analytical processing and knowledge acquisition.

The system allows:

- development of intelligent production systems with focusing on robot programming,

- human simulation in production - ergonomics, PLC programming,

- simulation and optimization of complex virtual production system.

The system also supports data storage in RDF, OWL format requires the definition of DL-based rules. Processes a visualizes extensive semantic structures of graphs.

Technology for comprehensive level assessment innovation and its market potential, management innovation

The technology is used for comprehensive evaluation, management, and planning of innovations within the company.

The system includes:

- audit of the innovation environment,
- an innovative intelligence system,
- innovation potential evaluation module,
- innovation financing module,
- planning and project management module innovation activities,
- creative problem-solving module,
- knowledge innovation module,
- innovation transfer module,
- software integrability.

Image recognition and processing software

The technology uses software to recognize and image processing and 2D recognition and measurement objects, computer vision with integrated development environment.

It is a software platform for data analysis from stored electronic documents with the possibility of them evaluation and visualization of results. First class image editing features allow you to

improve quality documents. Simple but powerful and functional a scanning application that is capable of processing as well bulk batches of documents. It allows you to scan and process both physical and digital electronic paper documents.

Intelligent 3D multi-camera system

This technology is used for image recognition, identification of objects and their paths in environment, process inspection and decision-making tasks within the intelligent production systems. 3D camera systems are designed for spatial image analysis of scanned components.

This system consists of:

SICK Camera

It is a smart camera that combines image projection and analysis into a single camera housing. The camera is used to inspect, position or measure objects to increase production accuracy, production control or quality performance control.

Camera Ruler

The camera is used to measure the 3D shaped objects. The measured data can be used to generate 3D images of objects or object volume measurement.

This system provides a measuring solution with speeds scanning, comprehensive process reliability and improved measurement resolution for near field applications distance.

Intelligent 2D multi-camera system

The technology is used for image recognition, identification of objects and their surfaces during inspections processes and decision-making tasks in intelligent production systems.

The set of 2D camera systems contains 4 types of cameras that allow accurate automation of quality control, sensing of dimensional parameters surface components and temperature characteristics within maintenance of machinery and equipment. It also contains infrared thermal camera with high optical resolution; and it is ideal for monitoring very small objects that could be difficult to recognize with other types of cameras. The technology also includes the Keyence profile projector, which simplifies the product inspection process. Except for automatic shape recognition and measurement offers also autofocus function and optical distortion compensation.

Technology for creating and using knowledge bases for virtual testing of technical and bionic products

This technology is used to create and use knowledge base for virtual testing of technical and bionic products, which contains a set of methods and procedures for intelligent data processing to create knowledge and simulate the testing of required parameters of products in real operation. The technology allows analysis voltage ratios using the finite elements method in the components of these products taking into account operating conditions.