

Automation Technique Design Classification of Technological Objects

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Abstract:

The development of artificial intelligence is rapid and the integration of artificial intelligence with automation has begun change work clothes. The article describes the methodology of using artificial intelligence methods to create an integrated environment for computer-aided design components based on the classification, integration and configuration of technological objects. This describes the formation of structures based on the object-oriented approach, methods setting up an integrated environment and organizing unified information empty space. The methodology of organizing the configuration of system components and the interaction of structured components, obtaining the final structured architecture, is shown to be aimed at solving the problem. Using this method for a formal description of project operations and the use of genetic algorithms optimization of the operational parameters of the process and the design of the technological machine are described. Companies and businesses are focusing on referrals Advanced Artificial Intelligence with automation progressions to take advantage of the new the pinnacle of skill and excellence. Paper gives an artificial picture intelligence and automation, and how it exposes both to the audience artificial intelligence and automation are intertwined and how they can be more when they work together and can have a competitive advantage.

Keywords: Autonomic computing, modernization, algorithms, automation industry, technological machines, information system, automated system.

Technological machines are widely used in all fields production activity of the person. They should be taken into account when designing properties of the processed material, technological requirements process, finished product quality, as well as geometric and design special features of the car. Market competition forces manufacturers to improve and creating new technologies to increase the variety of products. That is why, production should be flexible, with the ability to readjust different types of raw materials depending on the flow of materials, product configuration, productivity, etc market needs. The design of complex technological machines is currently the main focus using computer-aided design systems to solve a wide range of engineering problems problems: power calculation, dynamics, kinematics, heat transfer, acoustics, durability, etc., modeling of technological processes of production and product assembly. This is achieved by combining modern hardware and software parameters and characteristics are selected taking into account the maximum for the task characteristics of the design process. The purpose of the work

is to demonstrate the methodology of computer-aided design technological objects using intelligent methods. The volume of design and engineering works, the proposed approaches allow to increase production efficiency design engineers. Today, automation of production processes is used in many areas. Almost every company uses software devices, regardless of the scope and size of the companies' activities. There are different levels of automation includes production processes. However, the same principles apply to any of them. They create conditions for effective work performs operations and forms general rules for their management on a regular basis. Principles of automation implementation The description of production processes includes:

Artificial Intelligence of Automation

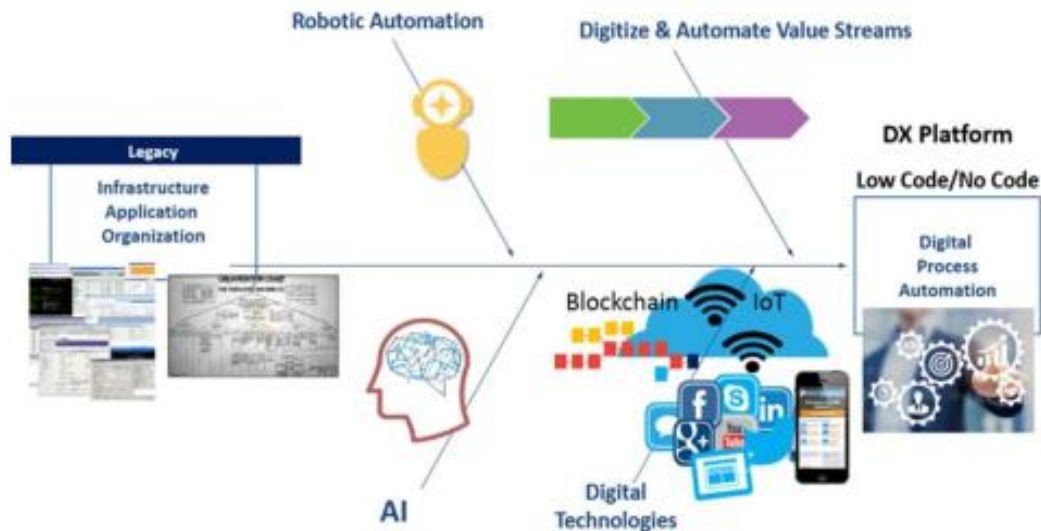
- The decision was made based on automation processes it is necessary to learn from the past experience and learn about the technological information, automation software.
- Ease of abstraction of component information for users and other software the algorithm of components can switch from one type to another, that is, in automation, several processes are performed by one technology;
- The possibility of parallel development of the components of a specific task ensures a change in the automation process;
- Change the component and replace it with an alternative, if any hardware or target platform has changed without changing the other components must be included in the automation software.

The project consists of a set of technical documents, which includes basic records substantiation of the need for construction or reconstruction of the facility, calculations and drawings necessary for this for the preparation of non-standard equipment, as well as for the implementation of all types of construction and installation work and adjustment works. Depending on the complexity of the object being built, the project will consist of certain items parts. Technical, technological, construction, plumbing, electrical engineering, automation. Control and automatic adjustment of technological processes, which is a branch of the automation project; and the control part is carried out by a specialized organization or automation department (group) of technological design. institute in this field. This project includes control measuring instruments, regulators, automation and signaling devices. technical documents used in the design object that ensure the reasonable operation and safety of technological processes in equipment work. In the implementation of the project, the organization that forms the technological part of the project is the basis and or customer assigned task. At some point, the organization that implements the automation project also participates in the creation of the assignment. Design tasks include:

- a) The composition of the object being designed, a brief description of the technological process, characteristics device and equipment;
- b) The result of the controlled and adjusted quantities should be calculated and placed in the automation supply, with the characteristics of the environment indicated;
- c) Errors detected based on control and adjustment of technological problems and functional characteristics are expressed.

Control, automatic adjustment and design of control systems can be carried out specifically instructions should be given. The following are examples of the development of automation in manufacturing from requests, departments, structures. Digital technologies like Social, Mobile,

Raincloud, The Internet of Things, Blockchain, Mock Aptitude and Robotic Process Automation each have one It was their theory in developing robust Error rate solutions, esp Those allowed by the development of Intelligent Automation steps will mark the automation device, taking into account technological errors.



Picture 1. Robotics and digital automation

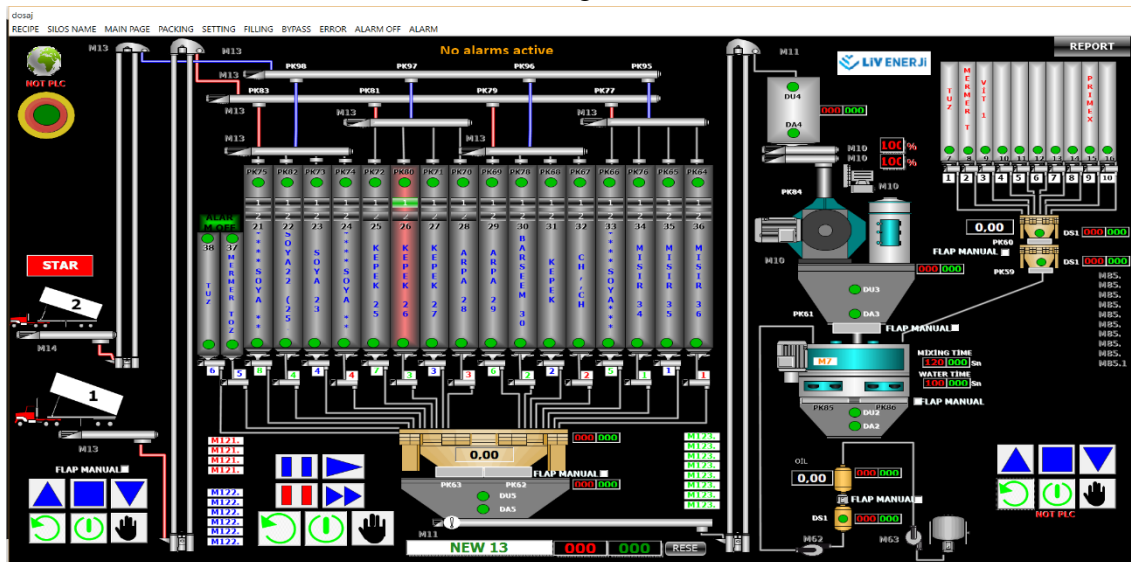
The new business process platforms of the digital age now include Low Code/No Code Powers to support civil designers. Conversion is now understood through digitization of end-to-end value streams and the speed of robotics - through DPA. The benefits of digital skills and authorization from Low Code/No Code development emphasizes the importance and best practices of methodologies.

The four methodologies described here are not rectangular. They depend continuous reasoning. They must be united in a solid revolution initiative that realize the potential of autonomous initiatives in action.

Methodology

We have attached the intelligent design methodology in the previous post where we have detailed about it Priority of novelty schemes. Design Intelligent is not a one-and-done methodology. Sometimes the administration has a design thinking workshop and it evolves the end of it. The method adopted here is design thinking – specifically idea generation invention and then Rating - constant. When creating working drawings, the tasks of the technical project are defined and described in detail, they are sufficient for the preparation of switches and remote controls, for the selection and implementation of automation tools and tools order, as well as construction and installation works. Automation systems should allow to increase the volume of work the drawings also cover the use of blocks prepared outside the assembly area. To improve the quality of the project documentation in the design of automation systems of technological processes, reducing their size and duration; it is necessary to rely on instructions and regulatory materials that incorporate advanced production experience in the field automation, as well as the use of normative materials of a universal and network nature. in creating projects of automation systems of technological processes, typographic projects should be used to the maximum extent, solutions, constructions, etc. As a rule, a is in search of the optimal combination of design parameters in a

technological machine, it is necessary to control its thermal and mechanical stress; as well as the intensity of interaction of the material with the working parts click mechanism and other control factors that limit the optimal search space and are limitations. Given the constraints on design optimization, It reduces the current type without the possibility of simplification and omission optimization to a conditional multi-parameter optimization problem. The principle scheme of automation is the main technical document of the project, which shows the level and the principle of technological device automation. All principled solutions adopted at the initial stage find an expression for building a management system. The drawing should provide an understanding of the control object tools used in control, adjustment, program management, alarming, blocking, protection and automation. Usually the signal, blocking and protection are enhanced in special drawings. Along with the control bodies in the principle drawings and schematically shows communications, a drawing of a technological device, automation tools, interconnections. between various devices and automation tools of technological units.



Picture 2. Technological scheme of evaluation in automation

The result of automation methodology (development) wants to improve. production and organization with high quality in all areas for customers, including safety, consistency and performance. "Technological automation" with conservative and manual methods may take weeks or even months, ultimately reducing the impact of the invention customer. It clearly shows the importance of all the stages of the methodology that should be related to speed and skills.

Conclusion

Automation issues are solved using primary technological tools, which include selected devices information determinants, information exchange and processing tools, input and output tools information and aids to service personnel. There are two ways to specify automation tools and tools, and conditional signs are recommended: automation tools and devices that perform complex tasks, for example, control, adjustment and signals are simplified and elaborated in an extended notation style and some block views with one conditional character. Devices performing auxiliary functions are not described. Automation and artificial intelligence are products of science. Such an idea machines could perform tasks just as humans have been inventing for thousands of years old. The intellectual realities expressed in AI and automation systems are not new either. This it

may be better to see these technologies as robust and long-recognized work intellectual principles through engineering. The use of automation and intelligence will increase almost all over the world every day. Today, people are completely dependent on them. These technologies save time and can perform multiple tasks more accurately at the same time a time when people can't. Electric mobility requires low-cost batteries with high capacity ability and performance to succeed. for this research on new materials for battery production is important difficulty A guide to increase the speed of learning the material it is necessary to automate and improve evaluation processes. This document proposes a design for an automated system materials evaluation for battery research. Because of the high automated and reproducible collection of test cells the information value of electrode processing increases, suggests a more precise development of the electrode materials. A detailed analysis to design such a system the impact of a possible failure on the assembly process, detection weighing technical solutions and its possibilities and technical complexity is implemented. Based on these was examined and a proposal for an automated system was developed and discussed. O'telbayev Azizbek, a student of the Nukus Mining Institute at the Navoi State University of Mining and Technology, gave several examples of the processes of their application in mining and presented to international journals the methods of automation of mining technologies through microprocessors and the technologies in mining at the same time. proved with several examples that it can be used in several technological processes. The use of modern technologies plays an important role in the development economy of the mine. It is necessary to pay attention to the parameters of technologies when automating processes in mining enterprises. Do not set the load beyond the limits of the technology, only then the technology will work for a long time without problems. In this article, I will inform you that if we install a microprocessor (automatic mode memory) in the technology in the mining enterprises, we will prevent the overloading of the technology. This ensures the operation of the enterprise and the safety of workers.

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