

THE CHARACTER AND THE NOVELTY RATE OF ENGINEERING SOLUTION

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Intellectual activity is a mental (spiritual, creative) activity of a man in science, techniques, literature, arts and design.

The result of an engineer's intellectual activity is a creative result, which essence is finding of particular technical means [1, 2, 3] for the solution of the task which has arisen in the sphere of practical activity. The new solution of a technical problem is considered to be an invention or a useful model. Thus the emphasis is placed on essence of the engineering solution. By means of the invention any practical problem in the field of equipment, agriculture, culture, education etc. can be solved, but exclusively by technical means. An engineer is a creator of the synthetic world. He creates new or modernizes existing technical systems, imagining them and designing them into a form of the engineering solution description. He is engaged in applied researches and solves practical problems inventing, developing, designing and bringing into production [1, 2, 3]. So, everything begins with a new idea, a result of engineer's intellectual activity, with information containing the new idea on the engineering problems solution (Fig. 1).

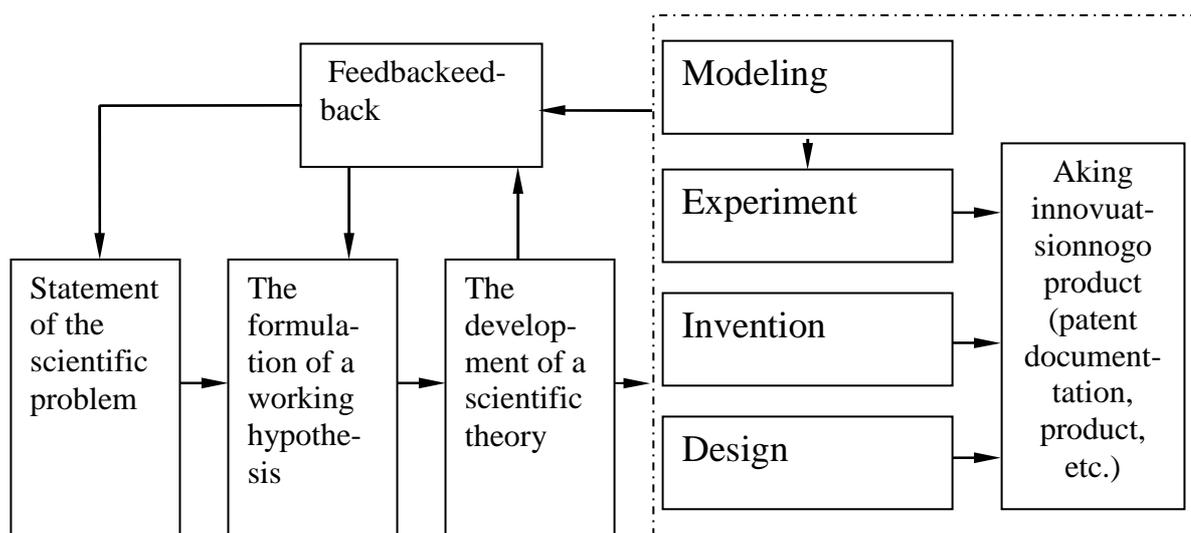


Fig. 1. General program for obtaining innovative products

Results of intellectual creative activity in the form of a new technical system model, a description of an engineering solution, a set of drawings aren't objects of exclusive rights. It is possible to use such result, but it is difficult to commercialize and assert a claim to competitors that use this information in their production. What is valuable, it is information issued in the form of the patent, confirming the exclusive rights to the result of intellectual activity in compliance with the law.

Use of legal mechanisms of protection of intellectual activity results doesn't concede on the importance of new technologies development. The phenomenon of growth of requirement for legal knowledge in the sphere of the intellectual right is caused by the market relations and such categories of economy, as the competition, integration, investment appeal. The world experience testifies: the success is guaranteed where it is possible to involve the new knowledge, new information capable of being protected in an economic turnover of the enterprise and to receive an innovative product.

In the material world the monopoly in something constrains development as there is no competition. In the Intellectual property law the monopoly in non-material objects is welcomed as for results of intellectual activity and means of individualization, which exclusive rights are confirmed with security documents, for example, the patent for the invention (a useful model, an industrial sample). Information, and not just any information is protected, but the one that corresponds to criteria of protectability in compliance with the law. And here it is lawful to talk about one of the criteria, defining protectability of a engineering solution, novelty. New engineering solutions are patented as inventions or useful models. But synthesizable engineering solutions possess different degree of novelty.

Novelty is a new set of the essential distinctive signs estimated on a particular prototype, chosen from the analogs the state of the art consists of.

Novelty is defined as non-obviousness of an object of the intellectual right from data on state of the art. Data on state of the art includes any data which has become public and obvious in the world before the date of a priority.

Nature of novelty of the obtained engineering solution is connected to a subjective notion of the author or the third party, or objectively existing and available information.

There is subjective novelty of an engineering solution if it has not been obvious to the author or an uncertain circle of people before its invention. This kind of solution is not patentable.

Objective novelty is the novelty of improvement suggestions which can be engineering solutions as well, but within one enterprise.

The rationalizer brings something new into production process. However, novelty of the improvement proposal is defined as a result of its comparison to the existing production process at this enterprise. The rationalizer applies already known, obvious methods or principles of work of equipment where they have not been used yet.

There is objective novelty if the engineering solution as the potential subject matter is not obvious from objectively existing and available information defining the state of art.

The Russian legislation, as well as patent legislations of other countries, demands existence of objective novelty of an engineering solution.

Moreover, determining the novelty of an engineering solution it is necessary to determine its rate. It defines the territory within which an engineering solution as the estimated invention (a useful model) shouldn't be obtained from public information before the date of its priority. There distinguished local novelty, relative worldwide novelty and absolute worldwide novelty.

Local novelty is about the data in the state of art that is obvious within one state.

Relative worldwide novelty includes the obvious data relating to the particular state of art in all states of the world.

Absolute novelty is defined in relation to any data included in the state of art that have become public and obvious on territories of all states (worldwide).

The Russian legislation establishes in relation to the invention the requirement of absolute world novelty, in relation to a useful model – the requirement of relative world novelty.

Thus, for each synthesized engineering solution it is necessary to define character and novelty degree to qualify it as the one capable of being protected (patented).

Bibliographic reference.

1. Grosheva E.P. Motivation of innovative activity // E. P. Grosheva, N. I. Naumkin // International journal of applied and fundamental research. - № 2. – 2012. URL : [www. Science-sd.com / 451-240441](http://www.Science-sd.com/451-240441) (15.07.2013)

2. Naumkin N. I. Preparing students of national research universities for innovation in learning technical creativity / N. I. Naumkin, E. P. Groshev, V. F. Kupryashkin, ed. P. V. Senin, J. L. Hotuntseva, Mosk. ped. State. Univ. - Saransk Publishing House of the muzzle. University Press, 2010. – 120 s.

3. Naumkin N. I. Basics of innovative engineering / N. I. Naumkin, E. P. Groshev, N. N. Shekshaeva, A. N. Lomatkin, V. F. Kupryashkin // International Journal of Experimental Education. - 2013. - № 5. - S. 65-67