Information Funds

Any self-respecting investigation begins with information gathering. TRIZ is no exception. Moreover, this particular science devotes a lot of attention to collecting and organizing information..

This could not be any other way. TRIZ is a science about development of technical systems and how this development can be controlled. In order to have full control it is necessary to know the ***laws of development***; to see and understand ***the system models***. This can be achieved only through studying an enormous amount of information about these technical systems.

One could say that TRIZ got lucky. Altshuller began his work when he was employed at the patent burro (invention inspection burro) in Caspian flotilla of the Soviet Navy. When Einstein was doing similar work he got the idea for the Theory of Relativity. Altshuller got his ideas for TRIZ.

It was soon understood that work at a patent burro requires more than just well written papers for the invention. More often than not the new invention had to be improved or even completely redesigned. New technique of creating the same invention is needed. But first, one must collect and analyze a lot of information about a variety of already existing solutions.

The basis of the information fund, information cards, may be very simple. On one side of a sheet of paper write down the initial state of the system, and on the other write down what is obtained in the process of solution, that is changes, improvements, development and etc. Also, indicate the purpose of these changes, or reasoning behind them.

While there is a few of these cards, it is simply a collection of isolated solutions with no connection between them. Then from the large mass of information the shape of a particular system gradually comes through.

Altshuller wrote that from 1961 to 1969 he selected and analyzed more than 40 thousand high class invention. To achieve this he had to work though almost the whole patent fund that USSR had at the time. But the product of his work was worth the efforts.

As it turns out, all the inventions can be classified into five levels. The first (lowest) level uses an already existing solution. The next one picks out one solution out of a few available ones. The third corresponds to the initial solution being significantly modified. Then follows the case when a completely new solution arises, and finally, on the fifth level a completely new course of actions comes to life. The choice of a problem and the development of a solution also can be classified in terms of different levels.

Eventually one can see some similarities between the methods which give the strongest solutions. They are ***the methods of eliminating technical contradictions*** and can be considered to be the first, although not very effective at the time, instruments of TRIZ. Already then Altshuller noticed statistical dependence of using such methods and constructed the first ***tables*** for their application.

Of course, these were still some of the simplest instruments of TRIZ, now they cannot even be considered ***«classical»*** to the full extent. Nevertheless, this work made the important step and began the formulation of the first ***systematic information funds*** of TRIZ. Gradually, the enormous body of potent data began forming an organized structure of the new science.