

# The history of TRIZSoft™ development and main assumptions

## The history

The first attempt to automate TRIZ was made by G. Altshuller in the mid-1960s when he built an electromechanical version of the Contradiction table with 40 Innovation Principles. The first ideas for utilizing a computer for TRIZ-based inventive problem solving occurred back in the 1970s. During the late 1980s and early 1990s, as far as we know, several teams of TRIZ specialists tried to develop such software products. *Invention Machine* software, based on Classical TRIZ and currently marketed in the USA, was developed in Minsk. The Novator Company in Moscow developed prototypes for two inventing software products: *Edison* and *Novator*. A team led by Professor Zaripov in Tashkent developed a prototype software for synthesizing new technological systems through the combination of various physical effects. Other attempts were made as well, but we do not have reliable information about the results.

The Kishinev TRIZ School embarked on the development of software based on theoretical research aimed toward the re-engineering of so-called “classical” TRIZ. A brief chronology of this software development is listed below:

- 1978            A project was outlined for developing a TRIZ-based, computerized system that would allow users to find inventions in patent libraries through a TRIZ analysis of a situation. This project was discussed in correspondence between Zlotin and Altshuller; it was never performed.
- 1988 – 1992    • Development of the theoretical base for TRIZSoft™ by a team of TRIZ specialists that included Alla Zusman, Boris Zlotin, Sergey Malkin, and Len Kaplan.
- The first prototype software for forecasting, called “Cassandra”, including a special module for forecasting evolution of systems for measurement and control, was built
- 1992            • The first hypertext prototype, called “Inventor Toolbox” (later renamed the *Innovation Workbench System, or IWB™*) was completed in April
- The first DOS prototype of Problem Formulator™ was completed
- 1993            • First presentation of the IWB™ in the U.S.
- First integrated DOS version of the IWB™
- 1994            First IWB sold in the U.S.
- 1995            • Development and sales of the Eliminator™ and Improver™ software products
- Development of the “Opershow” system for modeling TRIZ



logic

- 1996
  - Development of a graphical Problem Formulator™
  - Development and sales of IWB™ for Windows
  - Development and sales of Ideator™ software
- 1997 Development and sales of the Anticipatory Failure Determination (AFD™) software
- 1998 Development and sales of the IWB™ for Windows-95<sup>1</sup>
- 1999 Development of Knowledge Wizard™ software

### Computerization as an obligatory element in the evolution of TRIZ

We consider computerization an obligatory element in the evolution of TRIZ, aimed at providing everyone with the ability to utilize the advantages that TRIZ provides: namely, the timely and effective generation of creative ideas, and the ability to avoid dangerous and costly mistakes during the evolution and implementation of these ideas.

Computerization is a mandatory element in the “system” of controlling the future, which we consider the primary mission of TRIZ.

It is our belief that TRIZ software has to provide people with the major advantages of TRIZ without necessitating a long-term TRIZ education or, ideally, any TRIZ education at all. Analogously, *to use a calculator effectively, one does not need to know how it is constructed.*

We do not think though that, in the very near future, human creative work will be performed by computers; rather, we desire to help any person to be creative through a transfer to the computer of routine work, well-defined and formalized procedures, work involving informational knowledge bases, etc.

### Parallel approaches to creativity

The natural way to invent and solve creative problems was always achieved through trial and error, and was especially effective when applied by gifted inventors. The methodology encompassed in TRIZ took the first step away from this "human" approach. TRIZ has little in common with the natural human ways of creative thinking. TRIZ is an *invented method* that allows one to achieve the same results as can be achieved with creative thinking, but in another way. TRIZ replaces – and displaces – "natural" creative thinking.

**TRIZSoft™** is the next evolutionary step. It is an *invented application* by which the same results can be achieved as with TRIZ, but in another way. TRIZSoft replaces and displaces "manual" TRIZ. This means that the utilization of TRIZSoft is an alternative way of inventing that is parallel to both "natural" creative thinking and "manual" TRIZ.

The evolution of creativity

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"Natural" creative thinking

<sup>1</sup> An important contribution was made by the members of Ideation software development team Vladimir Nikitenko and Yevgeniy Subbotin.



"Manual" TRIZ  
TRIZSoft™

TRIZSoft™ is a system of problem-oriented software that provides the user with the ability to reveal, formulate and resolve problems in a creative way, and to improve systems in various areas of human activity, such as technology, science, business, management, daily living, etc.