

| | | |
|---|-------------|--|
| | 1950 | Alan Turnig: paper Computing Machinery and Intelligence: "I propose to consider the question, 'Can machines think?'" |
| | 1951 | |
| | 1952 | |
| | 1953 | |
| | 1954 | |
| | 1955 | |
| | 1956 | |
| | 1957 | |
| | 1958 | |
| | 1959 | |
| | 1960 | |
| | 1961 | Altov Genrich (Genrich Altshuller): Can machine think? - science-fiction story |
| | 1962 | |
| | 1963 | |
| Evrotron 2 solved an inventive problem. Letter of G.Altshuller to Patent office: 03.06.1964 | 1964 | Altshuller G. named his 'method to invent' as Algorithm of Inventive Problem Solving (ARIZ) |
| | 1965 | |
| | 1966 | |
| | 1967 | |
| | 1968 | Altov Genrich: Machine of discoveries - science-fiction story |
| Altshuller G.S. ALGORITHM OF INVENTION. Moscow: Moscovskiy Rabochy. (1st ed.-1969; 2nd ed.-1973) p.272 in English ed. | 1969 | two main directions for ARIZ development: (1) as a program for intellectual; (2) as an algorithm for machine (p. 289); THEORY TO INVENTION is suggested as a natural stage in evolution of science |
| | 1970 | |
| | 1971 | |
| | 1972 | |
| Tsourikov Valery: last year student at Minsk Radioengineering Institute (MRTI) | 1973 | Tsourikov V. - idea: " <i>synthesis of new ideas with help of computer</i> " |
| Tsourikov V.: learning TRIZ from Altshuller G. as correspondence student at AzOIT Public university | 1974 | Tsourikov Valery: synergy of TRIZ and Artificial Intelligence can give a powerful output to support creative thinking |
| There are about 300 TRIZ-schools around USSR | 1975 | development of prototype of the IM systems (PULSAR), Tsourikov V. |
| first classes of Minsk TRIZ-school for Young Inventors @ MRTI - Tsourikov V. (weekly 4h classes = 80h) | 1976 | |

| | | |
|---|-------------|---|
| Tsourikov V. completed his TRIZ-education at AzOITT (Altshuller G., Filkovsky G.) | 1977 | |
| beginning of weekly TRIZ-meetings at Tikotskogo str., Minsk | 1978 | |
| | 1979 | |
| | 1980 | |
| | 1981 | "...PULSAR system gives first practical results after 8 years of development..." |
| > Tsourikov V.: a year of postdoctoral research at Imperial College, London - Artificial Intelligence (AI) | 1982 | language for AI project: micro-PROLOG |
| > regular theoretic seminar for TRIZ developers at Minsk; | 1983 | |
| | 1984 | |
| Kalevi Rantanen, Finland (student of Belarussian Polytechnical Institute) learns TRIZ (Altshuller G., Tsourikov V.) | 1985 | Altshuller G.: Life strategy of Creative Personality (GSTL) |
| Book: Petrovich N.T., Tsourikov V.M. A WAY TO INVENTION. Moscow: Evrika, Molodaya Gvardia, 1986. p.224 | 1986 | Martinov Victor, Golenkov Vladimir, Tsourikov Valery: <i>letter to government about perspectives of Artificial Intelligence</i> (to raise funds for organizing AI laboratory) |
| > Autumn - research laboratory of Intelligent systems (later NILIS) | 1987 | IM-ARIZ |
| January 1, Research laboratory of Intelligent systems (NILIS) @ MRTI (Tsourikov V. - chief of laboratory); | 1988 | first working prototype: Inventive Machine (IM) written in PROLOG |
| > first purchase orders from Finland for IM; | | |
| > first conferences for IM Project | | |
| >> April 12, Invention Machine Laboratory as co-operative (NILIM) | | language for project: LPA Prolog Professional 2.6 (Edinburgh Prolog) |
| >> July 1, first commercial version IM 1.0 (IM-Principles; IM-Standards; IM-Effects) | | IM-Pulsar; IM-Evro; IM-Algorithm |
| > 37 industrial companies of USSR purchase IM 1.0 | 1989 | December: St.Petersbourg's group joined project (formally) |
| > Office at St.Petersburg (consulting Litvin S. & Ko); Office at Krasnoyarsk | | |
| > October, IM 1.1 | | |
| >> July, IM 1.2 in Russian (20x5¼-inchdiskettes); IM 1.2 in English; | | growth of research projects: IM-Prediction; IM-Patents (application); IM-VEA+TRIZ; IM-Phantograma; IM-Techno; IM-Tutor; IM-ARIZ for Macintosh |
| > participation at international exhibitions – Edmonton, Calgary (Canada) ; | | |
| > seminar at UNESCO – Paris, France; | 1990 | |
| >> October, First Symposium: Inventive Machine Project ; | | |
| > network of resellers (80 cities) in USSR, Finland, Bulgaria; | | |
| > IMLab offices at Chelyabinsk, Novosibirsk, Odessa, Mariupol | | |

| | | |
|--|-------------|---|
| <ul style="list-style-type: none"> > International exhibitions: Chicago, San-José (USA); <li style="padding-left: 20px;">> Gold medal of exhibition UNIDO EXPO'91; > successful consulting projects at Finland and USA; <li style="padding-left: 20px;">> October: IM version 1.3 in Russian and in English; <li style="padding-left: 40px;">> IM-VEA+TRIZ 1.0 (value engineering analysis); > October: IMLab office at USA; Resellers at France and Germany <p style="text-align: center;">-----</p> <p style="text-align: center;">Training courses about IM-Technologies:</p> <ul style="list-style-type: none"> <li style="padding-left: 40px;">6h - Introduction; <li style="padding-left: 20px;">24h - Application of IM-Principles, IM-Standards, IM-Effects; 40h - Introduction to TRIZ + IM software; case studies of students; <li style="padding-left: 20px;">140h - TRIZ + IM-P, IM-S, IM-E, IM-VEA; case studies | <p>1991</p> | <ul style="list-style-type: none"> > knowledge description using Universal Semantic Code (USC): group of Martinov, Victor V.; > Tsourikov, V.M., 1991. Inventive Machine project: intelligent environment for supporting engineering. TRIZ Journal. 2(1), 17-34 > Suchkov V.V., 1991. <i>Analysis of the development of intelligent systems based on TRIZ (system of inventive standards)</i>. TRIZ Journal, 2(1), 35-41. > Skuratovich A.I., 1991. <i>Intelligent system for supporting Value Engineering Analysis - IM-VEA</i>. TRIZ Journal, 2(1), 41-43; > Boiko I.M., 1991. <i>Semantic Coding and Solving Intellectual Problem</i>. TRIZ Journal, 2(1), 43-47. > Tsourikov, V.M., 1991. <i>Mathematical effects - new chapter of TRIZ-information funds</i>. TRIZ Journal, 2(1), 48-55; > Devoino I.G., 1991. <i>Complication of engineering systems</i>. TRIZ Journal, 2(1), 56-63. |
| <ul style="list-style-type: none"> > IM software applied at 600 companies and institutions in former USSR, Finland, USA, Bulgaria, France, Poland; in high education system at Germany, The Netherlands, Sweden, Czech Republic; <li style="padding-left: 20px;">> IM version 1.5 in Russian, IM-Patents 1.0 in Russian; <li style="padding-left: 40px;">> IM 1.3 in French, German; <li style="padding-left: 20px;">> Invention Machine Corp. April 07 | <p>1992</p> | <p>IM-Algorithm;</p> |
| <ul style="list-style-type: none"> > April: IM Lab becomes Public Limited Company; <li style="padding-left: 20px;">> IM-VEA+TRIZ 1.1; <li style="padding-left: 40px;">> 1500 copies of IM software are sold; <li style="padding-left: 20px;">IM-Tutor v. 1.0 | <p>1993</p> | <p>Tsourikov, V.M., 1993. <i>Inventive machine: Second generation</i>. AI & SOCIETY, 7(1), pp.62-77.</p> <p>IM-Tutor for Windows</p> |
| <p style="text-align: center;">IM version 2.0 (in English version for Windows)</p> | <p>1994</p> | <p>Redesigning IM-Standards: visualization of Inventive Standards + examples: before → after invention (operational zone);</p> |
| <p>IM-TechOptimizer IM-Lab 2.11 - Software that Invent;</p> <p style="padding-left: 40px;">Invention Machine office at M.I.T. (USA);</p> <p style="padding-left: 40px;">NILIM (IMLab) → ScienceSoft;</p> <p style="padding-left: 40px;">IM-Phenomenon</p> | <p>1995</p> | <p>IM-Everest project: intensify application of Internet resources</p> <p>semantic technologies for working with information can be useful for next generations of IM: group of Sovpel, Igor V.;</p> <ul style="list-style-type: none"> > animated graphics for descriptions of examples; > growth in number of research projects; > research about cause-effect chains |

| | |
|--|---|
| <ul style="list-style-type: none"> > IM-Phenomenon was announced the Product of the year by NASA: NASA Tech Briefs, Product of the Year: TechOptimizer; > about 130 employers on data base (researches, animators, translators); > IM-TechOptimizer 3.0; | <p>1997</p> <ul style="list-style-type: none"> > research about USC is closed; > US Pat. 6056428: Computer based system for imaging and analyzing an engineering object system...; > Subject - Action - Object (SAO) model (semantic analysis story); > US Pat. 5901068: Computer based system for displaying in full motion linked concept ... > <i>TRIZ is powerful but it's not a mass product</i> > Q4 - productivity of information update: 100 records to data base per week!! |
| <ul style="list-style-type: none"> > IM-TechOptimizer 3.5; > NILIM = NILITIS + ScienceSoft (??); > Computer Graphics World, Innovation Award Winner: CoBrain; > Deloitte and Touche, New England Fast 50 Companies; > Fortune Magazine, Cool Companies; | <p>1998</p> <ul style="list-style-type: none"> > group of Sovpel, Igor V.- about 50 researches... |
| <ul style="list-style-type: none"> > Knowledgist (notebook) and Cobrain (server) technologies for English are presented in US for industrial and researchers; > Dassault Systemes Invests\$6 Million In Invention Machine Corporation; > contracts with large corporations; > NASA Tech Briefs, Product of the Year: CoBrain | <p>1999</p> <ul style="list-style-type: none"> > US Pat. 6202043: Computer based system for imaging and analyzing a process system and indicating values of specific design changes; > US Pat. 6167370: Document semantic analysis/selection with knowledge creativity ... > first semantic processor retrieves cause-effects chains!! > access to Deep Web Articles (paid data bases and information sources) |
| <ul style="list-style-type: none"> > TechOptimizer 4.0; > drop in activities for examples in data bases; > <i>Cadence Magazine</i> , Editor's Choice Award: Knowledgist; > <i>R&D Magazine</i> , Top 100 Product of the Year: Knowledgist; > customer base of over 800 companies across multiple industry sectors, many of them <i>Fortune 1000</i> organizations... | <p>2000</p> |
| <ul style="list-style-type: none"> > Tsourikov V. leaves the Invention Machine Corp.; > Invention Machine Innovation Master CertificationProgram; > Knowledgist 2.5; > Dot-com bubbles; > considerable slow down of IM Project development | <p>2001</p> <ul style="list-style-type: none"> > US Pat. App. 9785018: Expanded search and display of SAO knowledge base information; > US Pat. App.10/003707: Computer based integrated text/graphic document analysis; > US Pat. App. 9/833021: Modeling of graphic images from text; > US Pat. 7962326: Semantic answering system and method; > US Pat. App. 9/815260: Natural language processing and query driven information retrieval > US Pat. App. 9/821847: System and method of analyzing and comparing entity documents; > US Pat. 7120574: Synonym extension of search queries with validation |

| | | | |
|--|--|------|---|
| | | 2002 | <ul style="list-style-type: none"> > US Patent 7251781: Computer based summarization of natural language documents; > change of business model of IM products towards large corporations; |
| > Review: TRIZ. <i>Scientific Computing World: Feature articles.</i> | | 2003 | <ul style="list-style-type: none"> > US Patent 7536368: Method for problem formulation and for obtaining solutions from a database; > US Patent App. 10/737147: Method and system for obtaining solutions to contradictory problems from a ... |
| > Goldfire Innovator; | | 2004 | Verbitsky M., Semantic TRIZ. triz-journal.com 2004, February |
| > ScienceSoft Inc., 180 employees | | 2005 | <ul style="list-style-type: none"> > US Pat. 7805455: System and method for problem analysis; > US Pat. 7672831: System and method for cross-language knowledge searching |
| TechOptimizer 4.0 | | 2006 | Verbitsky M., (2006) IM. Computational adaptation of TRIZ, VEA, and semantic web. |
| | | 2007 | US Pat. App 11686660: SEMANTIC PROCESSOR FOR RECOGNITION OF WHOLE-PART RELATIONS IN ... |
| | | 2008 | |
| | | 2009 | |
| | | 2010 | <ul style="list-style-type: none"> > US Pat. App 12723479: SYSTEM AND METHOD FOR KNOWLEDGE RESEARCH; > US Pat. App 12723449: QUESTION-ANSWERING SYSTEM AND METHOD BASED ON SEMANTIC LABELING OF ...; > US Pat. App 12723472: SYSTEM AND METHOD FOR AUTOMATIC SEMANTIC LABELING OF NATURAL |
| Invention Machine Corporation, Boston, MA (US); | | 2011 | Invention Machine Goldfire: |
| Gen3partners (US); | | | (1) Premium Content Sources; |
| ScienceSoft Inc.; | | | (2) Worldwide Patent; |
| NILITIS → DISFA Global, LLC; | | | (3) Deep Web Articles; |
| EffectiveSoft | | | (4) Scientific Effects (9,000 illustrated scientific theorems, laws, and phenomena); |
| | | | (5) Inventive Principles; |
| | | | (6) System Modification Patterns (System Modification Patterns - derived from TRIZ methodology) |
| | | | using Cloud Computing and thin-client technologies; |
| | | | semantic processor for Chinese language; |
| | | | semantic processor for Korean language; |