Improved Method for Drawing Functional Diagrams on the Computer

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Making functional diagrams on the computer with MicroSoft Word Shapes or similar drawing packages is desirable from a documentation standpoint and from a rapid modification standpoint when compared to drawing them manually. However making the diagrams similar to those done manually is very time consuming by the computer. This new method uses the Tool-Action-Object method as described in some popular books on TRIZ. An example comparing the manual method with the new method is given to show the advantages.

Biography: Assistant Prof. Donald Coates, Ph.D.

Dr. Coates taught courses on innovation, energy power and industrial controls at Kent State University's College of Applied Engineering, Sustainability, and Technology prior to his retirement from full time teaching in 2011 as a tenured Assistant Professor. He is still actively teaching courses on innovation using TRIZ and consulting on patent litigation. He was instrumental in establishing an interdisciplinary minor in innovation in the CAEST, a minor and major in entrepreneurship in the College of Business, and developing one of the first on-line TRIZ courses in the USA. Previously he was Vice President of Engineering at the Speed Queen Division of Raytheon, Director of Corporate Primary Development and Director of Dishwasher Engineering at the Frigidaire Company of AB Electrolux, Director of Research for the Hoover Company of the Maytag Corporation and Manager of Whirlpool Automatic Washers at the Whirlpool Corporation. He received a Ph.D. and MSME from Purdue University and a BSME from the State University of New York at Buffalo. He also received the Distinguished Engineering Alumnus and Outstanding Mechanical Engineer awards from Purdue University. He holds 38 US and international patents with another 8 pending and has authored eighteen publications including a contributing author to the book Global Innovation Science Handbook by McGraw Hill. He is member of the American Society of Quality, Tau Beta Pi Engineering Honorary, and the VP of the nonprofit Altshuller Institute for the Theory of Inventive Problem Solving.