

TRIZ Grows TRIZ

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Abstract

The TRIZ Journal has been published monthly since November 1996. As The TRIZ Journal grew from its initial two readers (the founding editors) to a global readership of tens of thousands people per month, a continuous stream of problems had to be solved – both and “inventive.” TRIZ was used to solve the problems associated with starting and growing The TRIZ Journal.

Case Study

The TRIZ Journal began in 1996 to provide a communications and publication channel for the infant English-speaking TRIZ community. At the time, there were two books in English, one in German and all other books and resources were in Russian or other non-English languages. Using conventional magazine publication as a baseline an ideality equation was formed based on beneficial (useful) functions, harmful functions and cost. (1, 2, 3)

$$\text{Ideality} = \Sigma \text{Benefits} / (\Sigma \text{Cost} + \Sigma \text{Harm})$$

Elements of the Ideality Equation for Conventional Publication

Benefits	Cost	Harm
Communication with other researchers and teachers	Mailing	Time delay between research and publication
Reports on TRIZ research	Printing and packaging	Time delay between submission of articles and editorial response to authors
Communication with potential students	Editors' time to edit contents	Environmental impact of use of paper, ink, plastics and fuel
Explain TRIZ to interested people	Typesetting	
Announce TRIZ events		

In order for the founders to have the benefits of a conventional publication with none of the costs or harm, they formulated multiple levels of Ideal Final Result:

- The magazine will publish itself.
- The magazine requires no time to create or sustain.
- The community creates itself.
 - Communication is one aspect of the community.
 - A publication is one modality of communication.

The founding editors followed TRIZ protocol by listing resources in the environment that could be used to solve the problem. (4) In addition to the classical list of resources (things that can be modified, fields, functions, information, etc.), they included the characteristics

of the people who were involved in the teaching and propagation of TRIZ. G.S. Altshuller's generosity of time and willingness to share his knowledge with people has permeated the TRIZ community, and the editors considered the attitude that knowledge should be shared to be a significant resource for this problem. (5)

It is significant that at that time many people were experimenting with email and the idea of information exchange via email was an explored concept. There were early developments of on-line communities (mostly using bulletin boards), initially oriented toward the use of specific computer-related products. (Managing a bulletin board, however, required a dedicated system administrator, so did not satisfy the requirement that the editors not spend a lot of time on the production of the system.)

Two barriers to the use of email contributed to the decision to create a website:

1. Many corporate email systems prohibited the attachment of documents.
2. Most non-corporate email systems used 14.4k dial-up modems, which were too slow for sending large documents.

As a calibration point, Google was two years in the future when The TRIZ Journal was launched. (The Altshuller Institute was a dream of Lev Shulyak's, but its launch was three years in the future.) TRIZ was spreading through the work of individual consultants and through the marketing efforts of software companies, but there were no active professional societies.

The founding editors, Dr. James Kowalick and Dr. Ellen Domb, both had experience with conventional technical journals in science and engineering and all the complexity that the print medium imposes – everything from formatting pages to cutting, binding and mailing the magazine, and to marketing a new magazine. The editors did not know enough about building communities to work on the IFR at that level, so first solved the problem of publishing the “ideal” magazine to achieve the dual purpose of:

1. Educating people who had never heard about TRIZ.
2. Sharing knowledge about TRIZ among those who were using it and wanted to improve their knowledge and skills.

Both objectives would be delayed if the editors needed to raise money, develop mailing lists and go through the usual steps of starting a new print journal. They had both a physical and technical contradiction.

Technical Contradiction: Information transfer gets better but complexity gets worse. The classical Altshuller Contradiction Matrix has a blank cell for this contradiction – consider all 40 principles for solutions. (6) An initial review of the 40 principles suggested the following:

Principle 28: Substitute a field for a mechanical device.

Principle 26: Use a copy of an object or system.

Principle 2: Separation or taking out. Use only the useful parts of an object or system.

Physical Contradiction: I want a technical magazine but I do not want a technical magazine. The separation principles, particularly separation of the contradictory properties of the subsystems from the supersystem, were particularly helpful.

Combining these insights with the resource analysis generated the concept of the TRIZ Journal as a website. The monthly email announcing that the new issue is ready was created to replicate the experience of receiving a print magazine – at the moment of opening the mail, the reader decides whether to read it, discard it, put it in a pile, or file for later reading.

The TRIZ Journal was announced at the first American Supplier Institute meeting. The members of that audience regarded themselves as sophisticated technologically, but many of them were not familiar with browsers or websites as the most common question demonstrates, “Which way do the slash marks go after the ‘http:’?” Today’s audience may laugh about this, but the readiness (or lack of readiness) of our target audience, people interested and curious about TRIZ, was one of the sources of conflict that gave rise to problems that had to be solved.

Conclusions

The conclusion to a paper that presents a hypothesis, data and analysis could be that the hypothesis is proven, that more work is needed or that the hypothesis is disproved. The obvious conclusion to a case study paper is “Yes, it worked” and the details of the case are offered to help others learn how to apply the method to their situations.

The TRIZ Journal has grown from the first issue, written and read solely by the editors, to tens of thousands of readers each month, in more than 100 countries. Dr. Michael Slocum joined as co-editor after Dr. Kowalick’s retirement in 1999. The TRIZ Journal has published more than 1,000 articles. In October 2006, CTQ Media LLC acquired The TRIZ Journal. CTQ Media created the portal Real Innovation (www.realinnovation.com) – the new home of The TRIZ Journal. The new site’s design has improved the readability, added a discussion forum and a commentary section to enhance communication – all managed by editor Katie Barry.

References

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Author Biographies



Ellen Domb, Ph.D., is the founding editor of The TRIZ Journal and the principal TRIZ consultant for the PQR Group in Upland, CA, USA. TRIZ is Dr. Domb's sixth career: she has been a physics professor, an aerospace engineer, an engineering manager, a product line general manager and a strategic planning/quality improvement consultant. Ellen is a founding member of the Altshuller Institute and a frequent speaker and tutorial presenter at TRIZCON, the European TRIZ Association, and the Ibero-American Innovation Conference. She is co-author with Kalevi Rantanen of *Simplified TRIZ*.



Dr. Michael Slocum has been co-editor of The TRIZ Journal for eight years. He has more than 18 years of research, development, quality and design experience, embodied in his book, *Insourcing Innovation*. He has solved over 4,300 technical and non-technical problems using TRIZ and has developed or participated in more than 500 patentable innovations. Dr. Slocum's work at Ontro was recognized by *Fortune* magazine as one of the 25 Breakthrough Technologies of 2005. Michael is now Chief Innovation Officer of Air Academy Associates.



Katie Barry is the editor of the TRIZ Journal and of Real Innovation (www.realinnovation.com). Ms. Barry previously held editorial positions at Fenwick Publishing Group, Inc., and AMN Healthcare, Inc. Katie also worked at the Children's Defense Fund and served three years in the correspondence office of First Lady Hillary Rodham Clinton at the White House. Barry has a Bachelor's of Arts degree in political science from the University of California at Santa Barbara in Santa Barbara, Calif., and a Master's of Business Administration from The George Washington University in Washington, D.C.