

TRIZ-It's All Around Us-----Part 2!

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In the training and educational aspects of TRIZ, there is a great tendency to describe sophisticated inventions in aerospace, machinery, and industrial equipment. Many solved problem examples cannot be shared with potential TRIZ users to whet their appetites. Last year, a presentation was made showing numerous consumer and simple industrial examples of products and systems that display the use of TRIZ principles, both the 40 basic and separation principles, as well as many of the generally accepted lines and patterns of product and system development. When these illustrations are seen, most of which were not developed with the use of TRIZ, it is obvious that many of them could have been commercialized years before.

This presentation will update these examples with interesting new ones from the banking and mortgage industry, household products, industrial packaging, grocery industry, communication systems, and others. We can take one of these to illustrate several TRIZ principles. Let's examine what has happened to the home mortgage industry. It wasn't that long ago that the only type of mortgage available was a 30 year "conventional" fixed rate. We now have at least 5 year increments from 15 to 40. The rates are not necessarily fixed, but may vary with any number of external commercial factors. The payment itself may be related to the borrower's income. We have mortgages in "reverse" where equity is lent back to the borrower. It is easy to see how this trend will continue down both these paths, well predicted by TRIZ lines of evolution and its inventive principles.

When these illustrations are presented to potential users of TRIZ, they begin to see the possible applications as the examples are immediately understandable and the connections can begin to be made to their own problems.



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Jack is a ChE from Carnegie Mellon University and spent 30 years in an industry focusing on breakthrough research and engineering, including responsibility for Dow Chemical's Discovery Research Director and Director of Chemical Engineering R&D. He was project manager for foreign technology sourcing and management practices at the National Center for Manufacturing Sciences, and Product Development Manager at both Ansell Edmont and Cabot Corporation. He has led on-site chemical engineering training for General Mills, Sabic Plastics, Victoria and

Brazosport Community Colleges and the U.S. Department of Homeland Security and has taught graduate level Inventive Problem Solving and TRIZ courses for Baylor, Eastern Michigan University, and the University of South Florida. He has served on the chemical engineering department advisory boards of Carnegie Mellon University and the University of South Florida. In 2011, he was elected to the National Board of Directors of the American Institute of Chemical Engineers, having previously served as Chair of its Management Division.

His TRIZ corporate clients have included Owens Corning, Siemens, MEDRAD, Bandag, Ariel Corporation, Corning, Dow Chemical, GAF, GM, Honeywell, Hollingsworth and Vose, Johnsonville Sausage, Lockheed Martin, Mead Westvaco, M&M Mars, MEDRAD, Mosebach Resistors, NCH Corporation, Eastman Chemical, S.C. Johnson, Air Products, the Tampa SOCOM military base, the Bank of Montreal, and James Hardie building products.

Jack is the author of the latest book on breakthrough problem solving, "The Ideal Result: What It Is and How to Achieve It" (Springer, 2012), and has written several articles for Chemical Engineering Progress, Quality World, Research-Technology Management, and Leaders in Action. He is a certified TRIZ Practitioner by the Altshuller TRIZ Institute as well as a certified KAI™ and Myers Briggs practitioner.