

Local Quality: Water and Bricks



"The only difference between a problem and a solution is that people understand the solution"

There is a TRIZ principle which can be considered a subset of the separation principles-- separation in space-- and one of its embodiments within the original TRIZ 40 principles is the concept of "local quality".

Purifying water in third world countries is a major global challenge. The cost of sewage treatment and water treatment plants is just out of the reach of most third world communities, so families resort to drinking water from polluted rivers and lagoons, many of which have untreated sewage, resulting in many deaths (nearly 2 million) caused by diarrhea and cholera. An average mother in a third world family walks nearly 4 miles a day just to find water and has to carry close to 50 pounds of weight in water back to her family. An invention called the LifeStraw(TM) (<http://www.lifestraw.com>) is a breakthrough in dealing with this problem and is being distributed around the world (their web site will allow you to donate these). At only \$3 each, it allows a family to provide drinking water for up to 18 months through the use of a specially treated filter device which cleans water to a level lower than current EPA specifications. The contradiction (get out your 60 year old table!) that is resolved here is between "performance of a stationary object" "and volume of a non-moving object". At this intersection we find the inventive principle (#3) called Local Quality. We perform the function that is needed only at the place, in the space, where it is needed. We don't need an expensive water treatment plant to treat only a small amount of water that one person wants to drink.

On the same page, Wall Street Journal (<http://www.wsj.com>), June 23, page R7 (headlined as "They Came, They Saw, They Innovated") there is a description of a less world changing invention, but illustrating the same principle. Masonry contractors have to deal with the inherent inefficiency of their masons hauling heavy blocks back and forth, and waiting in line, to a masonry table saw. The solution to this problem, "duration of action of a moving object" vs. "speed" is also inventive principle #3, Local Quality is achieved by the invention of a small, light weight portable saw made by MK Diamond Products: (http://www.mkdiamond.com/masonry/saw_bx4.html)

As we have said before, there are only so many inventive principles to use in improving new products and these two impactful, but divergent, inventions illustrate that wonderfully. What function do you see performed in centralized ways or locations, that if done locally or in a specific space or location, could greatly improve productivity or reduce cost?

Don't forget our capability to assist you with breakthrough patent filings--contact our associate Mark Reeves at the EM address below or at 651-770-0408.

Our other associates at Elliot Consulting have also won some recent contracts assisting firms and cities with business continuity plans--they can help you as well. <http://www.elliott-consulting.com>. We use Predictive Failure Analysis to assist in this area.