U-SIT And Think News Letter - 01

Unified Structured Inventive Thinking is a problem-solving methodology used in creating unconventional perspectives of a problem for the purpose of discovering innovative solution concepts when unstructured brainstorming has waned.

Dear Readers:

We seem to have reached a "critical mass" (if numbers can have a mass attribute) of registered readers for issuing the first U-SIT And Think News Letter. This issue has updates on the USIT textbook and USIT ebook, and it initiates a series of Mini-Lectures on USIT.

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1.   Textbook: USIT – How to Invent:

Since the price of the USIT textbook was lowered to $44.50, some time ago, a strange thing has happened – several times. Occasionally, an order will arrive bearing a check in the amount of the original cost. Of course this is corrected, but it makes one wonder.

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2.   Ebook: USIT – an Overview

- Distribution of the free ebook: "USIT – an Overview" was downloaded 157 times in 37 countries in its first 8 weeks of availability.

- Dr. Ellen Domb has published her review of "USIT – an Overview" at www.triz-journal.com

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3.   Mini USIT Lecture – 01

Well-Defined Problems Begin With Unwanted Effects

Our typical approach, in starting to solve a problem, is unstructured brainstorming that we unconsciously initiate the instant a problem is stated. Problems are intellectual challenges to our mental capabilities and we are excited by the challenge. Finding a new solution or beating a colleague to a solution is intellectually rewarding. The efficiency of our unconscious brainstorming ability is awesome. We all do it and we do it well. At some point, however, unstructured brainstorming wanes while we yet feel that more ideas are out there to be found. This is the time for structured brainstorming to create unconventional perspectives – it is an opportunity for unified structured inventive thinking.

Starting to work a problem is a problem in itself. Where to start? How to start? Initially these are two unanswered questions. By my definition, *any question without an answer is a problem*. An answered question is no longer a problem. However, an unanswered question is not necessarily a well-defined problem. Hence, the first problem-solving phase of USIT is to construct a well-defined problem.

A well-defined USIT problem has, among other characteristics, *a single unwanted effect*. Thus, to begin an application of USIT on any problem situation we must unravel the situation into as many unwanted effects as possible. Then rank them, and then select *one* to be addressed. The brain cannot solve two problems at the same time. This is the first step in forming a well-defined USIT problem. Identifying, ranking, and selecting one unwanted effect is an efficient way to start motion on problem situations that seem to have no obvious handles. This technique has proven its worth many times in USIT-class exercises (and in corporate "fresh

eyes" teams), that I have led, where students address company problems they bring to class and can't seem to find a way to start solving them. Of course, they are stymied because they have not constructed a well-defined problem.

An Exercise: Consider the following situation.

A publisher speaking: "*The ink on our newsprint is messy. Fix it*!"

What is the problem? Answer this by unraveling the problem situation into as many relevant unwanted effects as you can. To keep process relevant and manageable, select a small set of objects (a minimal set) that contains the problem situation and work within that set.

A well-defined problem also contains root causes – a topic for a future mini lecture.
We'll continue this exercise in the next U-SIT And Think News Letter.

Mini USIT-Lectures will cover the three phases of problem solving:
1. Problem Definition – constructing a well-defined problem
2. Problem Analysis – the tools for new problem insights
3. Problem Solution – application of USIT problem-solving techniques

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4. Classroom Commentary

5. Problem-Solving Tricks and Related Miscellany

6. Feedback

7. Q&A

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8. Other Interests/News

I. **Latest patent for a concept derived using USIT:**

US Patent Number: 6554332, April 29, 2003

"Pedestrian impact energy management device with seesaw elements";

Inventors: Peter Jon Schuster (US), Liz Tait (GB), Bradley Staines (GB), Christopher William Lucas (GB), and Edward Nathan Sickafus (US)

II. **Resource references for problem-solving tricks and techniques?**

I am researching the literature for a manuscript (in process) and need references to resources on problem-solving tricks and techniques (otherwise known as heuristics). I have the www-sources noted below and need others readily available to the general public. Any help will be appreciated. Do you have favorite sources you turn to? Do you know of world-wide-web resources of problem-solving tricks and techniques? Other sources, such as books and journals, would also be appreciated. Perhaps our USIT and Think News Letter readers would be interested in these also.

III. **World-Wide-Web Resources for Structured-Problem Solving Information**

USIT:	www.u-sit.net
SIT:	www.start2think.com
USIT/TRIZ:	www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/
TRIZ:	www.triz-journal.com

Please send your feedback and suggestions to Ntelleck@u-sit.net

To be creative, U-SIT and think.