Problem Solving Method by using "Method for Creating Wisdom from Knowledge"

Column 7 R2 (revised) : Comparison with the conventional problem solving method
Extracted from the Book "Method for Creating Wisdom from Knowledge" (page161～163)

The "Method for Creating Wisdom from Knowledge" opens up a practical and new approach to solve problems.　The Synopsis of the book appears at http://dtcn-wisdom.jp/00001-R3E1.pdf

The method described in this book was originally for task realization.

In Chapter 1, it was stated that the realization of the "Task" solves the "Problem". Conventionally, solutions to problems were recognized and defined as below where they are attained by following the next work phase.

1. Gathering information: Information is gathered from the environment and analyzed, and a problem for which a solution is needed is discovered.

2. Search for comparative plans (alternatives): Search, and make alternatives for solving the problem discovered in the previous phase. When doing so, as humans have limitations in their information-gathering capacity, not all the alternatives can be found.

3. Evaluation of comparative plans (alternatives):
The results of searching for alternatives are predicted, compared and evaluated. When doing so, as humans have limitations in their calculation ability, a perfect prediction and evaluation are impossible.
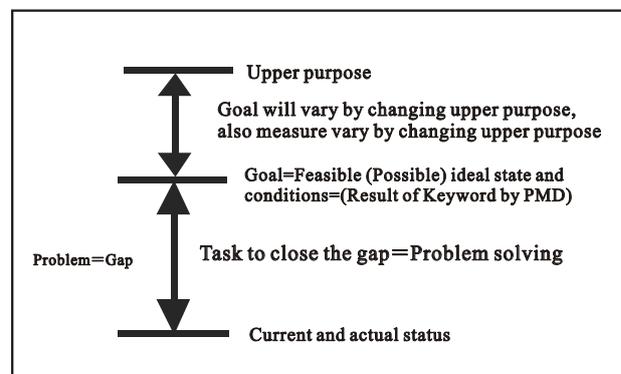
4. Selection of comparative plans (alternatives):
The results of each alternative are predicted, compared and evaluated, and the alternative that satisfies the standard of the evaluation is selected. However, as humans have limitations in their rationality, one cannot help but to conduct decision-making based on the principle of attaining satisfaction.

5. Implementation of comparative plans (alternatives):
The selected alternatives are implemented and the prescribed results are secured.

6. Feedback: The results of the implementation are evaluated and analyzed and the information is fed back to the next decision-making.

This is how problem solving was conventionally carried out. And, according to the contents of phase 2, discussions which had problems in creativity (necessary conditions) were conducted.

In addition, various styles of problem solving methods and problems in creativity were discussed. However, in Chapter 1 of this book the problem was assumed to have the one condition, to realize the task. With this in mind, the mindset and methods conveyed from Chapter 2 basically do not contradict the above conventional method for problem solving, but is thought to greatly embrace it. Moreover, by grasping the PMD and Keyword, what have been described as "hypothesis establishing (abduction)" and "deduction" approaches can be conducted all at once. Deduction, which follows the hypothesis establishing, is the Keyword expression. Induction is used for phases 1 to 4 of the Steplist to verify and evaluate. The "deductive approach" (phases 5 to 8 of the Steplist) is used to deploy the evaluated results for creating an embodied mechanism useful for society. (For more details, refer to "Advanced Method for Analysis" http://dtcn-wisdom.jp/00001-E-analysis.pdf)

Besides this, the natural phenomena that has occurred up to now, the problem of clarifying the cause-effect relationship of things that occurred in the past and to predict future natural phenomena and solve the problems of its influence, because the results are known, an RCD (Result Cause Diagram) is created to know what needs to take place in order for those results happen when establishing a hypothesis, which is similar to the PMD. For future natural phenomena, an FRCD (Future Result Cause Diagram) is created and its Keyword is grasped to be a deductive expression where its contents are verified and evaluated inductively. Through the problem solving and task realization methods discussed in this book and not in the conventional sense, the results are then made useful to society. Though still in its rough form, this has been presented in the Creative Society thesis (1999) "A Procedure and Format for the Thinking and Action of "Abduction, Verification, Evaluation and Decision Making" to Reveal Rational Past Mechanisms and to Create Future Mechanisms" (The contents can be downloaded from the following URL.)

"Advanced Method for Analysis" http://dtcn-wisdom.jp/00001-E-analysis.pdf)
and http://dtcn-wisdom.jp/E-edition%201/18-Appendix%20H%20R6%20Acrob4.pdf

Japanese version
http://dtcn-wisdom.jp/00001-J-analysis.pdf)
and http://dtcn-wisdom.jp/J-Edition%202/J20%20app%20H%20abduction%20J.pdf

To obtain the Japanese Version of the book "Method for Creating Wisdom from Knowledge", click the following URL
http://dtcn-wisdom.jp/00001-R3.pdf