Finding the needs of customer by the SN Matrix and TRIZ process
- The functional approach for connecting methods and 7 solutions -

Takashi Ogata, Kazuhiro Fujikawa, Hiroyuki Tsuchiya (OLYMPUS Corporation)

Abstract

OLYMPUS has introduced and promoted QFD, TRIZ, and Taguchi Method as a scientific method for improving the development process since the 2009. Recently, we are promoting 7 Solutions to extend the application of TRIZ to meet the needs and targets of engineers. Focusing on the function of the system is important for connecting smoothly to the methods and solutions.

In this paper we introduce the new effective process in the elemental technology development stage and searching process. This process is re-organizing technology elements (Seeds) according to their function and finding the needs of customers in combination with the Seeds and Needs Matrix (SN Matrix) and TRIZ process.

In our company QFD →TRIZ → TM process was introduced as the ideal development pattern.
Especially simplified QFD is useful and effective, for extracting technical problems from customer needs.
(Reference to the paper of OLYMPUS in TRIZ Symposium 2011)

QFD is effective for clarifying the relationship of customer needs and product specifications in quality control purposes. However, QFD is not effective in the search stage and planning stage, because seeds and needs are not clear. Engineers want the process that can find the needs based on the seeds for connecting high affinity with TRIZ.

New SN Matrix with the concept of QFD and the function from the point of view of time and space is possible to connect easily TRIZ and other methods as follows.

1. The SN Matrix makes it easy to find the needs of customer by separating the (quality goals) achieved level and function. And engineers came to be able to determine the priority of technical problems with the customer needs and technology of competitors in each function.
2. The SN Matrix is applied to a wide range of technical issues by analyzing the function from the point of view of space and time.
3. In the process to actualize the seeds, the New Logic tree of desire and TRIZ process can remove the boundaries of knowledge and experience of the engineers. This process can lead to find a variety of potential needs.