

Your Vision, Our Future

TRIZ of "Type of fulfilling the desire" to make ideas based on the function ~Case study of "Making Strong Patent solution" in OLYMPUS 7 Solutions~

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Presentation of Today

- 1. About OLYMPUS
- 2. OLYMPUS promotion system
- 3. Problems of TRIZ at OLYMPUS
- 4. Approach to the problem
- 5. Two types of TRIZ approach
- 6. TRIZ training in OLYMPUS
- 7. Summary



1. About OLYMPUS



Established : October 12,1919

Head office : Shinjuku-ku, Tokyo, Japan

Capital : ¥ 1,245 billion (As of March 31,2016)

LS-P2

Consolidated net sales : ¥ 8,046 billion (Fiscal Year Ended March 2016)

Consolidated headcount: 33,336人 (As of March 31, 2016)

Imaging Business

Endoscope system for 4K surgery



Surgical Energy Device THUNDERBEAT



Two Therapeutic Support Systems Incorporating Robotic technology



OM-D E-M5 Mark II



PEN-F



TG-Tracker



Scientific Solution Business

DSX Series Digital Microscopes



Industrial

endoscope

IPLEX NX



Stereomicroscope SZX16



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2. OLYMPUS promotion system Introduce of new ideas method







4. Approach to the problem
<u>Taking advantage of TRIZ to the desire in</u> <u>the upper layers of the function</u>
1. Taking advantage of the TRIZ in the purpose and ideal thinking!
<u>Converting the function to the desire expression</u>
⇒ Change to the idea of "I want such a thing ! "

- 2. Eliminate the bondage from the existing system ! By replacing the function of the wide range of the upper layer to the other means, to break down the psychological inertia from the unit or parts
 - ⇒ Taking more advantage of Effects and inventive principles of TRIZ.



5. Two types of TRIZ approach In Sushi Bar



6. TRIZ training in OLYMPUS

Two types of TRIZ approach



Flashlight with Manual generator



6-1. Flashlight with Manual generator <u>Task : Reduce force to hold, to be more</u> <u>easily to light up.</u>

LED 2-lamp



ratchet mechanism: one direction movement

Gear rotate faster by gear ratio

9

Spring return the pushed handle

Coil generation

Flywheel rotate the magnet

Handle

Cam

transmit the movement of Hand in gear



6-2.① Functional analysis





6-2.①Cause analysis Cause analysis from the upper layer of function tree





6-2.①Definition of contradiction ¹³ Define the effect to be worse by improving the root cause



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6-2.1 Desire analysis

Desire analysis from the upper layer of the

function tree





OLYMPUS

6-2.2 Effects (1) <u>More interesting idea if you can apply Effects</u> <u>in a wide range</u>

As we will see a lot of scenery reflected in the window, Inspiration by Effects!



want new

means

TITUTIO

6-2.2 Effects (2) Induce inspiration to use Goldfire*



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6-3. Result of exercise (1)

Experience the features of two idea approach

Task : Reduce force to hold, to be more easily to light up



6-3. Result of exercise (2)

"Desire type" creates more innovative and wide range of idea



6. Summary

- 1. "I want such a thing !" can take advantage of TRIZ more with ideal thinking.
- 2. "Type of Fulfilling the desire" can create innovative ideas, by breaking down psychological inertia due to the bondage from the unit or parts.

《 Next challenge 》

For Engineers' inspiration, further investigate the effective approach from case study.



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Thank you for your attention

