A Method of Resolving Differences Based on the Concepts of Functions and Process Objects Part 2

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Abstract

This article improves the framework of the method of "resolving differences" which consists of problem solving, making new function and idealization based on the concepts of "function" and "process object".

These three types of "resolving differences" have a unified input-output relation. We set the purpose in terms of Object. Then we find out input of object to get this purpose of object for every kind of logical types of changing Object.

Extended Abstract

Practically one of the reasons Process Object has not been treated explicitly so far is that we don't grasp the way how to deal with it. In some cases Object 1 and Object 2 change Process Object. This is shown in next Figure.
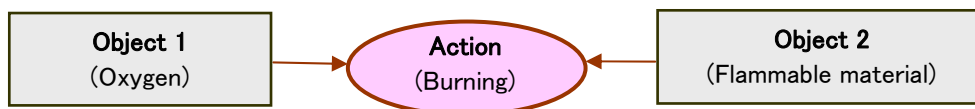

Figure 8. Change Process Object
Using "Object 1- Process Object- Object 2 Model"

We have **three logical types of changing Objects** contributing to function which are **generating Process Object, deleting Process Object or changing attributes of Object. Three types of purposes in Resolving Differences are making new function, problem solving and idealizing.**

We resolve differences in three steps. In the first step of **deciding the purpose** we decide the target in terms of Object to set this as an output of Figure 9 or Table 3 of "Operation and transformation of Object" to be obtained. We recognize the differences depending on the situation to have one of three logical types of changing Objects consisting of generating Process Object, deleting Process Object or changing attributes of Object. For example to solve a problem we aim to delete the Process Object or change attributes of Object.

Second step of **designing** is to obtaining knowledge about pre-action if necessary and how to operate Object depending on the situation.

Third step of **designing** is operating of Object to make an input to get the purpose. We can find an Object and operate the Object and transform Object using the domain knowledge about situation.

As in the step of deciding purpose and operation of Object we use formal and logical types of changing Objects, we can obtain the unified way to various kinds of resolving differences.
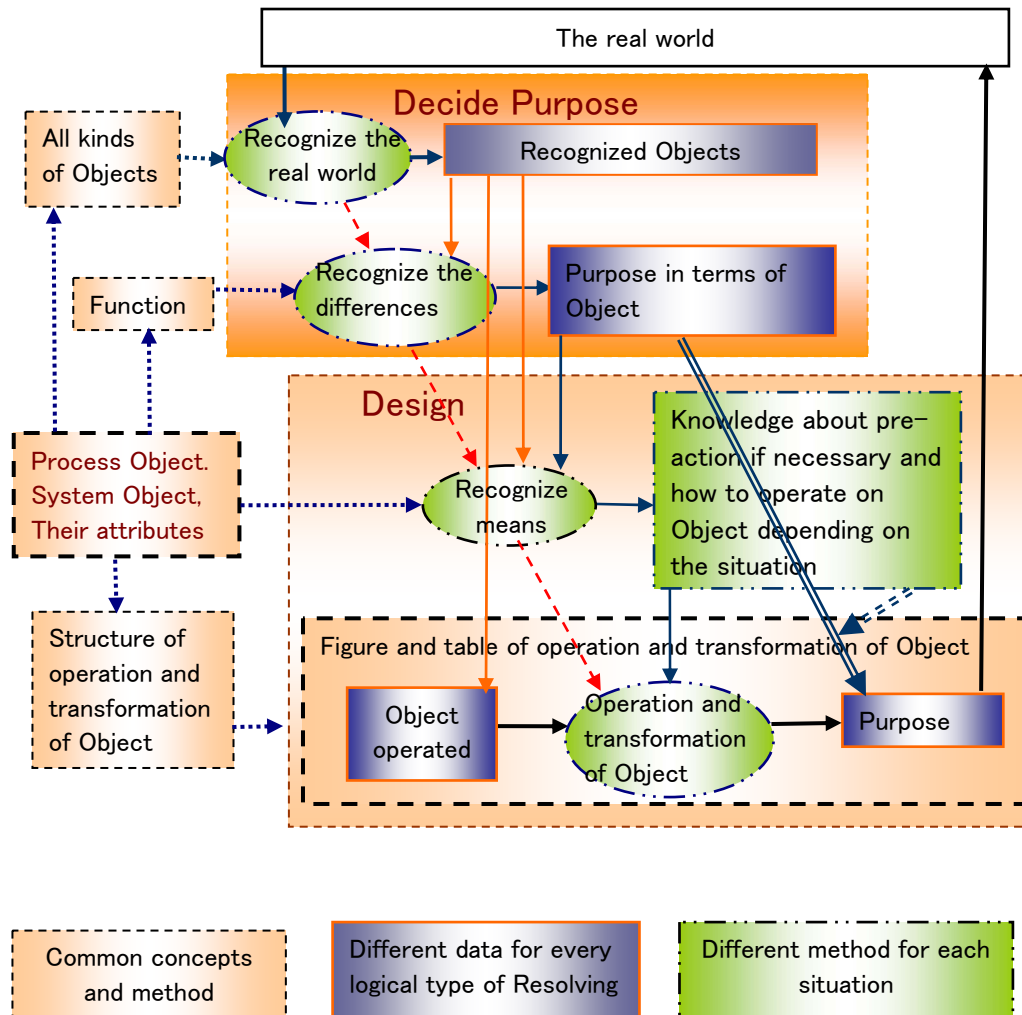This is shown in next figures.

Figure 10. Structure of Resolving Differences at the granularity of changing one Object

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