

Model base difference development

The series development (development of the derived product of the product that has already been released) is frequently done on a lot of software development sites. The decrease in the development efficiency and the quality tends to occur when the kind becomes 10 and 20 though it is possible to finish digesting if the kind of the derived product in the series development is 2 to 3 by even correspond claptrap. It is because the grasp of the combination of the optional features of each product becomes difficult because the number of optional features increases. Then, the quality of product and the development efficiency can be greatly improved according to the development process for the derived product defined beforehand.

The process for the series development is difference development. In the difference development, the person in charge in the each stage of work develops based on the difference of the upper process.

Definition of difference requirement

First of all, any development starts from the definition of the requirement. In the difference development, it will start from the difference requirement (difference from the requirement before). When the person in charge of the requirement definition can clearly define the requirement, the difference requirement is passed to the person in charge of development.

Design, Implementation, and Test of difference

The difference specification (difference of the specification to the difference requirement) is continuously defined in the decision of the specification referring to the difference requirement. In the design, the difference design is made by referring the difference specification. The difference development of the lower process is advanced in the difference development referring to the difference of the upper process like this.

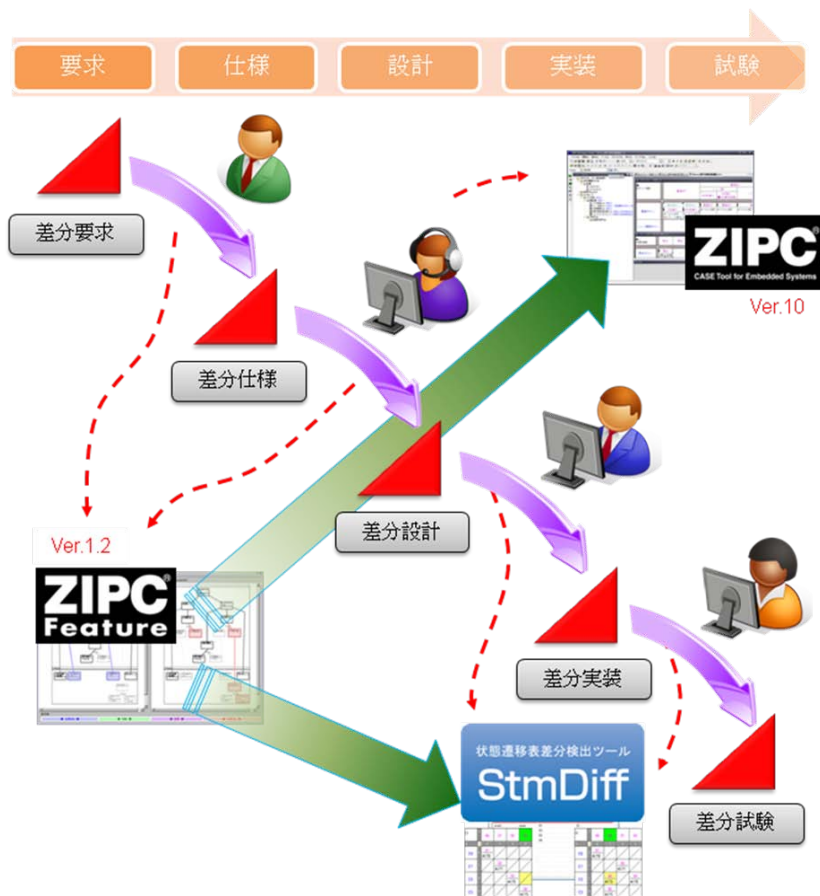


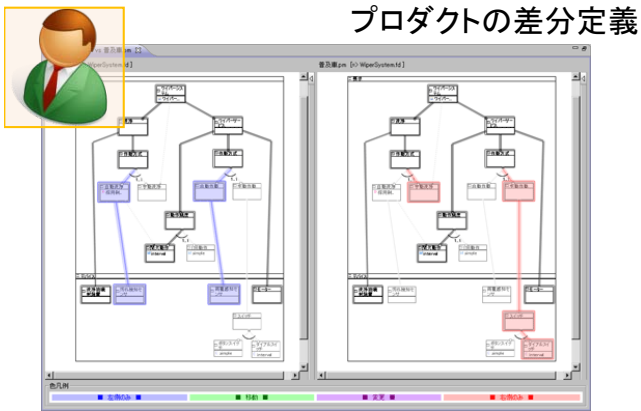
Fig1 Flow of difference development

Take over the difference with no leakage of design

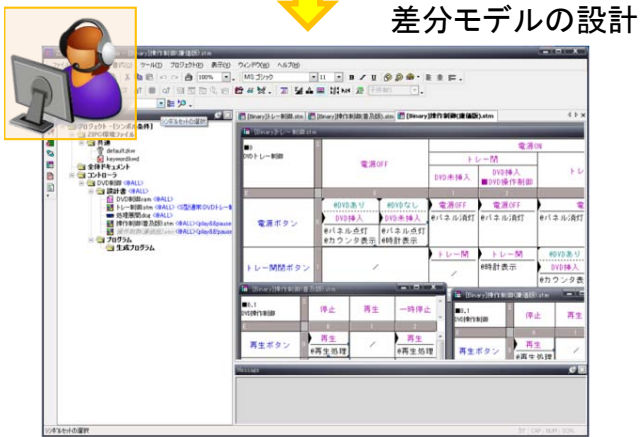
In the difference development, it is important to take over the difference with no design leakage which based on option functions between products at upper process to lower process. If the difference specification is not correctly understood, a correct difference design cannot do, and if the difference design is not understood enough, cannot examine an enough difference (examination to the difference specification and the difference design).

Model base difference development procedure

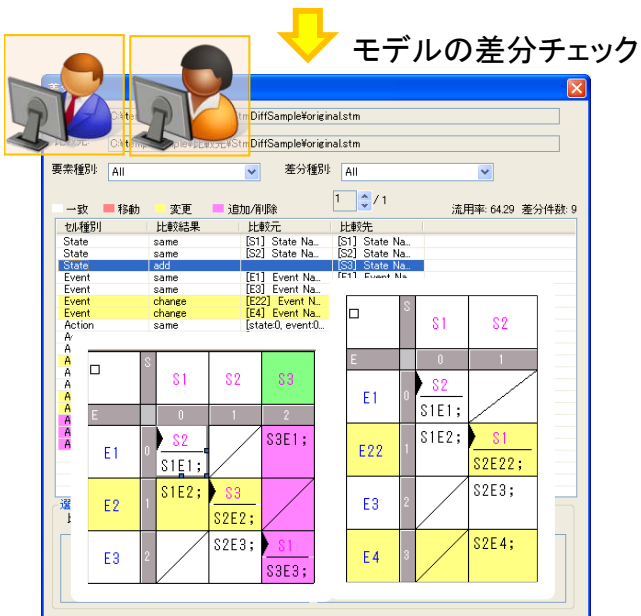
If it is ZIPC V10 + Feature, the property that is now is made the best use of and the difference development can be started.



プロダクトの差分定義



差分モデルの設計



モデルの差分チェック

Fig2 difference development with no leakage

① Definition of Product

Please define the composition of the product (product) with ZIPC Feature. The entire products are analyzed, the feature model is made, and an individual product is defined as a product model. As for the definition of the product, even only the part where existing assets and the difference are generated is enough. When the following difference is developed, it only has to make the part of the remainder detailed gradually.

② Design of Each Product

Please read the product model of ZIPC Feature by the import function of the symbol set of ZIPC V10. Two or more derived products can be developed by defining "Symbol set" on one project. If this function is used, the state transition matrix can be efficiently reused.

The model of ZIPC Feature must design the difference in the state transition matrix while confirming the difference of the requirement between products.

③ Comparison between Products

The comparison of projects of installing function can do the comparison between products to ZIPC V10 by interpreting "Symbol set". Please select two products from ZIPC Feature, and execute the comparison function of the ZIPC project.

The person in charge of coding and the person in charge of the test must confirm the difference of the behavior between products from the project comparison result and then proceed work.

Take Advantage of Existing Assets

ZIPC V10 can read the project of current ZIPC. By using ZIPC V10 + Feature, let's start the difference development with no leakage design that makes the best use of existing assets.