

The Test Savior of Model Base Development is Now Available!

Decrease Test Specification Design Man-Hour to 1/2 now!

Due to expanding of embedded system, there are problems of increase in design man-hour and decrease in design quality. 『Perfect Pass』 supports model base development of the problems. It is new type of development supporting tool that support 1. Model Base Test Realization, 2. Decrease in Test Man-Hour and 3. Increase in High Quality of Design.

Design State Transition Model and Model Base Test

◆ Test Specification Auto Extraction

Normally, the design method is based on source code. If this method is used, the user has to create own test environment and it is unproductive. If test specification auto extraction or its auto test is executed, standard model base development is required.

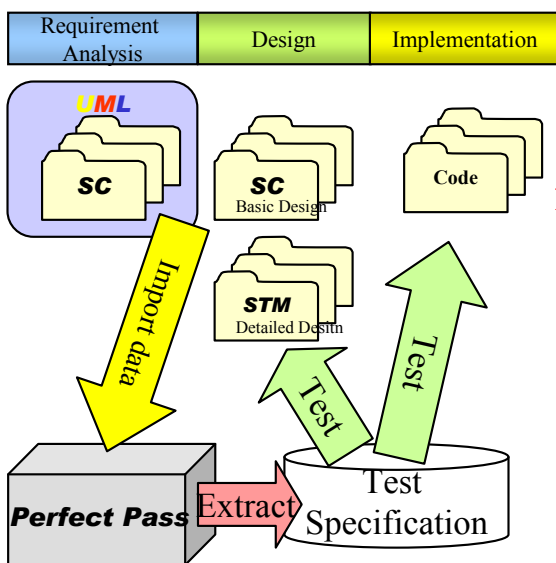
In this too, “State Chart” that is already standardized by UML, or “event” and “state” can be written as coverage. Also, test specification can be auto extracted by state transition matrix.

“Key” to the development process is model base test!

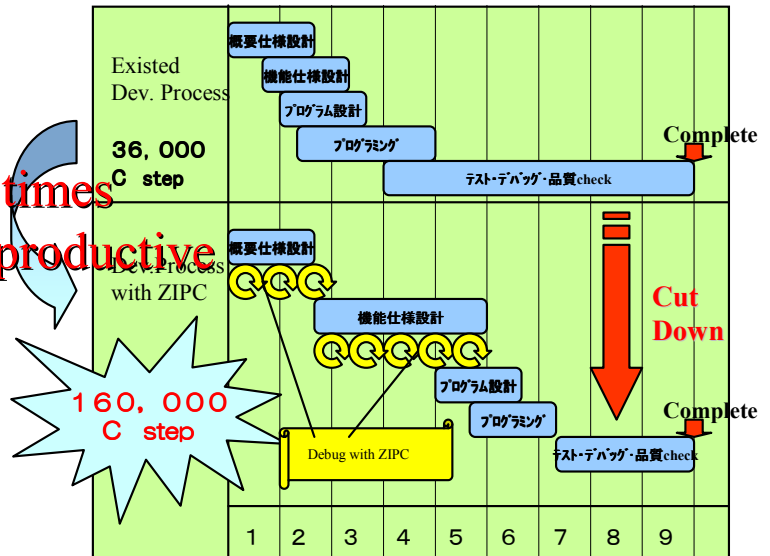
(Do you test only at the end of development process?)

Usually, development process is requirement analysis, design, implementation, and test. Because of this, many defects are found in test process. Also, many of specification defect is found in this test process thus, you have to rethink requirement analysis again. Now, you have to modify and test again and extension of test process is occurred.

By using model base test in each specification design, end of test process is shorten dramatically. (picture below)



4 times more productive



Now, how do you think to create test case in model base test? Do you think “you can test cases which created on your thought”?

“Key” to the development process is a model base test!

(Do you still think test case on your own?)

In the normal test, the designer write the test specification by looking at state transition model. Now, the question is, “all of test specification (sequence) can be extracted from state transition model?” Answer is “it is impossible except extremely small model.” For example, can you extract test sequence by thinking event sequence from motor control model below? Did you extract 50? 100?

| 状態 イベント | 電源OFF | モータ停止 | モータ回転中 |
|-------------|--------------|---------------|--------------|
| | 0 | 1 | 2 |
| 電源SW_ON | 0 =>モータ停止 | / | / |
| 電源SW_OFF | 1 =>電源OFF | 1 =>電源OFF | 2 =>電源OFF |
| モータ回転SW_ON | / | 2 =>モータ回転中 | / |
| モータ回転SW_OFF | / | / | 3 =>モータ停止 |

In fact, if you extract total test sequence based on picture above, it can be 4129.

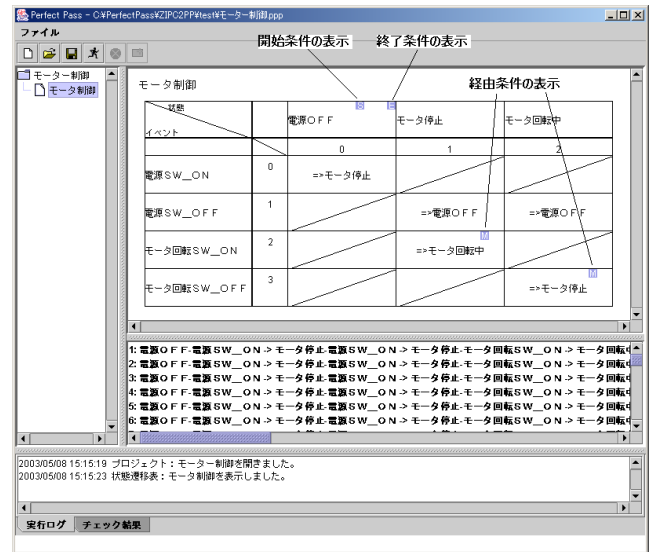
Like the example above, even the small state transition model cannot extract test sequence by human hand.

Test sequence is extracted from state transition model by one touch!

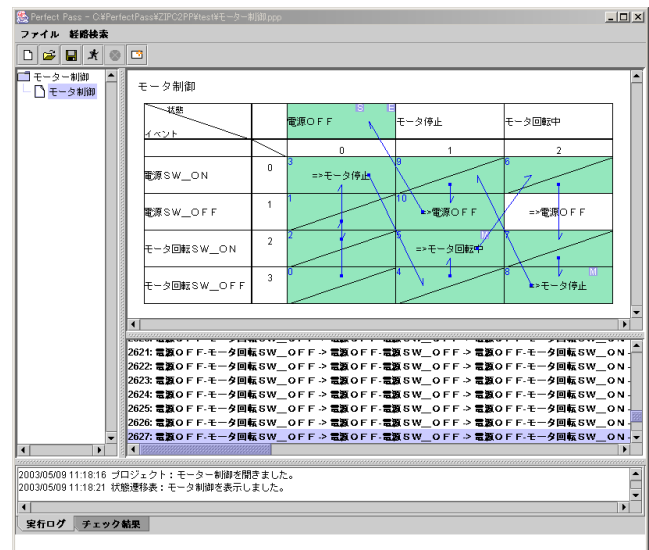
Main functions

- State transition sequence test specification extracting condition setup function.
- Sequence extracting start condition, sequence extracting end condition, and sequence via condition can be setup.

- Test specification extracting function
By using condition that is setup, state transition sequence is extracted.



- Test specification display function
Extracted state transition sequence is displayed on state transition matrix.



Operating environment: Windows XP, Windows Vista/Eclipse (Perfect Pass is plugin of Eclipse)

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