

Response to comments of Dave

Dave[3]

Response: Yes. In the revised version, I have added a short sentence to mention partition testing in the abstract.

Dave[4]

Response: OK, I have added more reference about ART.

Dave[5]

Response: In my opinion, ‘faults’ will be better. The reason is that faults in software are discovered due to erroneous behaviour and faults are triggered could lead to system failures. In the fourth paragraph of Section 1, we want to express that if the execution result of an input does not match the expected result, then the execution results of the other inputs in same partition do not match corresponding expected results.

Dave[6]

Response: Yes. You have a very precise understanding.

Dave[7]

Response: Our experimental results showing DRT to outperform RT in terms of fault finding.

Dave[8]

Response: In terms of selection overhead, From Figures 7 to 9, we can observe that in most of scenarios DRT had the better performance than RT and RPT. However, we cannot guarantee that DRT certainly have a better performance. DRT require additional computation compared to RT and such additional computation is compensated by having fewer program executions. When the test case execution time saved by DRT is not sufficient to cover the additional computation, RT will have a better performance.

Dave[9]

Response: The plural of formula can be spelled either as formulas or formulae (from the original Latin).

Dave[10]

Response: It should be “Formulas 1 to 4”. By the way, I had a mistake in this paragraph, the overall time complexity for DRT to select n test cases should be $O(mn)$.

Dave[11]

Response: Invocation of a web service requires analysis of the input message in its WSDL, and then assign values to input parameters.

Dave[12]

Response: The reason I introduce the list below is to make it easier to express my opinion that SOA testing can be more challenging than traditional testing in next paragraph.

Dave[13]

Response: OK.

Dave[14]

Response: I have added some recent references.

Dave[15]

Response: I have added some recent references.

Dave[16]

Response: the importance of partition can be determined in different ways, for example, some partitions may have more faults based on past testing experience.

Dave[17]

Response: I have added some recent references.

Dave[18]

Response: Yes, you have a correct understanding.

Dave[19]

Response: In the ideal case, a partition should be homogeneous, that is, if one input is fault-revealing/non-fault-revealing, all others inputs in the same partition will be fault-revealing/non-fault-revealing too. Therefore, in theory, partition testing is effective.

However, the homogeneous of partition cannot be guarantee. So, it's hard to say PT is effective.

Dave[20]

Response: In section 2.1 we have already described DRT in detail.

Dave[21]

Response: I'm sorry, and I have turned numbers to labels.

Dave[22]

Response: Yes, you can think so.

Dave[23]

Response: I have removed some unused full-sops.

Dave[24]

Response: OK.

Dave[25]

Response: Yes, all the changes you have made are correct.

Dave[26]

Response: Sorry, I don't understand what you mean.

Dave[27]

Response: There are some problems with the current tool, and I will make a new one as soon as possible.

Dave[28]

Response: Actually, we conducted an empirical study to evaluate the efficiency (by F-measure) and effectiveness (by T-measure).

Dave[29-30]

Response: OK. I have changed the column headings in each table, and checked the

IEEEtran_HOWTODO file, and finally changed all tables according to the guidelines. However, TABLE 3 is so big that I added an order, as follow:
`\resizebox{\textwidth}{12mm}{...}`.

Dave[31]

Response: OK.

Dave[32]

Response: OK.

Dave[33]

Response: I have changed my statement, and referenced some papers in which a technique is evaluated by F-measure or T-measure.

Dave[34]

Response: OK.

Dave[35]

Response: I have deleted the last line of the previous paragraph.

Dave[36]

Response: OK.

Dave[37]

Response: It should be schema.

Dave[38]

Response: Yes.

Dave[39]

Response: I follow the practical guide of Andrea Arcuri in [37].

Dave[40]

Response:

Dave[41]

Response: Sorry, it should be 18 distinct faults, and the details of the mutants have been described in Section 4.2.

Dave[42]

Response: Please read the Section 7 of [37].

Dave[43]

Response: OK

Dave[44]

Response: In the previous version, there are some errors in Section 3.2. After correcting the errors, I ran the experiment again. Therefore, the data is different from the previous data.

Dave[45]

Response: In our previous work (Adaptive Partition Testing), we used the “scenarios” to express the same meaning.

Dave[46]

Response: After rethinking, I think ϵ^* is a better symbol, indicating the special value of ϵ .

Dave[47-48]

Response: OK.

Dave[49]

Response: Yes, you captured the intended meaning.

Dave[50]

Response: I’m sorry. I have added these labels.

Dave[51]

Response: Ok.

Dave[52]

Response: I referenced two new papers, one of them was published in 2014, and the other was published in 2016.

Dave[53]

Response: I referenced two new papers.

Dave[54]

Response: Yes, we have something more to say.

Dave[55]

Response: OK.

Dave[56-58]

Response: OK.

Dave[59]

Response: OK.

Dave[60]

Response: OK.

Dave[61]

Response: OK. Besides, can you tell me what is the full name of the “RRT”. I’m sorry, I do not know this method.

Dave[62]

Response: AT is based on the same observation as ART.

Dave[63]

Response: AT has been shown to perform better than RT and RPT in fault detection.

Dave[64]

Response: Li et al. proposed O-DRT, which has an objective function and a pre-defined parameter f that is criterion. During the testing process, the value of the objective function is calculated. If this value is greater than f , then test profile will be adjusted to a theoretically optimal one.

Dave[65]

Response: OK.

Dave[66]

Response: Yes, you have a correct understanding.

Dave[67]

Response: DRT obtains better performance than both RT and RPT according to F-, F2-, and T-measure.

Dave[68]

Response: I replaced this word with “better”.

Dave[69]

Response: Prof. Sun

Dave[70]

Response: I used to have the same opinion as you. However, Beijing university of Aeronautics and Astronautics changed its English name to Beihang university in 2002.

Dave[71]

Response:

Dave[72]

Response: same as 70

Dave[73]

Response: I changed the first sentence.