**Reflection on Yaoguang's Peak Array Split Defect**

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**1 Details：**

1.1 For example the array input as below where we gave 11 digits.

11

10

9

8

7

6

5

4

3

2

1

1.2 The first split, we could see the digit-6 will auto arranged to the right part.

11

10

9

8

7

6

5

4

3

2

1

1.3 And the second split, we may see the digit-3 will be auto arranged to the right part

11

10

9

8

7

6

5

4

3

2

1

1.4 The third split, we may see the digit-4.7.10 will be auto arranged to the right part

11

10

9

8

7

6

5

4

3

2

1

**2 Thinking:**

After the split array showing, we could see clear that the big problem about the asymmetry defect, as I did an annotation of N, so the i of N will absolutely find a n/pow（2，i）value points, as an insufficiency asymmetry defect model, I fall in thinking…if I do any compute theory as the same with this model style, for example in the recursion or inner loops, it will autonomic separate to the 2 different process way, it necessary to do indifferent flows.

**3 Problems:**

So, after the above thoughts, I may get any flashes,

First, the even and odd digits both are asymmetry while in the Differential loops

For this noise, I defined as (Tinoise Peak)

Second，once we did a split compute under this model, it must get more unfair sets

I defined as (Tinsets defect)

Third, if this model almost in the messy and timer data system, it will catch more time and asserts wastes or exceptions.

**4 Solutions:**

For the god like, I find three solutions while I currently enrolled in my projects.

First: computer logic acceleration, at least it can avoid the waste of the compute by using inner process optimism. -- To avoid the deep recursion.

Second, reduce the compute sets. For any less memory system, we may reduce more and more memory garbages after we reduce the inner register or temp value sets.

Third, we may make an optimization of the function logic where to instead the old complex functions. Those ways include the condition, algorithm, method or discrete optimization

End, we may use mathematics of double differential, deep definition, acquisition or polynomial to get the solutions.

**5 True Instances**

5.1 Deta parser：

https://github.com/yaoguangluo/Deta\_Parser  
<https://gitee.com/DetaChina/DetaParser>

5.2 Yaoguang.Luo quick sort 4D

<https://gitee.com/DetaChina/Deta_Data_Processor_Pub/blob/master/DP/sortProcessor/Quick_Luoyaoguang_4D.java>

<https://gitee.com/DetaChina/Deta_Data_Processor_Pub/blob/master/%E5%BE%B7%E5%A1%94%E5%BF%AB%E9%80%9F%E6%8E%92%E5%BA%8F%E5%B0%8F%E9%AB%98%E5%B3%B0%E8%BF%87%E6%BB%A44%E4%BB%A3%E7%AE%97%E6%B3%95%E5%8E%9F%E7%90%861.0.docx>