

Project - AMM (A dvanced Matching Mechanism) by N . Paul
the diagram:

Raw Binary Array1:

0
0
1
1
0
0
1
1

Processed Binary Array1:

0
1
0
1

Raw Binary Array2:

0
1
0
0
1
1
0
0

Processed Binary Array2:

1
0
1
0

(Matching Accuracy Rate: in this case 1 element of Processed array is for every 2 element of Raw array, i.e = $1/2 = 50\%$)

This rate will determine how accurately to match the binary array.

The user can adjust the machining accuracy rate so that they can get the highest matching percentage in a certain accuracy rate.

Ranged from 0 to 1
(like $1/3 = 33.33\%$ or $1/2 = 50\%$ or $1 = 100\%$)

Matching Percentage: This function will calculate the percentage of similarity between the elements of two processed binary arrays.

in this case

is 0 match with 1 -> No
is 1 match with 0 -> No
is 0 match with 1 -> No
is 1 match with 0 -> No

∴ Matching Rate = 0 out of 4
∴ Matching Percentage = 0%

∴ In this case: We get Matching Percentage 0(%) , when the matching accuracy rate is $1/2$ (i.e 50%)

(Similarly if the Matching Accuracy Rate was 25%) -->

Raw Binary Array1:

0
0
1
1
0
0
1
1

Raw Binary Array2:

0
1
0
0
1
1
0
0

(Matching Accuracy Rate: in this case 1 element of Processed array is for every 4 element of Raw array, i.e = $1/4 = 25\%$)

Processed Binary Array1:

1
1

Processed Binary Array2:

1
1

Matching Percentage..:

in this case

is 1 match with 1 -> Yes

is 1 match with 1 -> Yes

∴ Matching Rate = 2 out of 2

∴ Matching Percentage = 100%

∴ In this case: We get Matching Percentage 100(%) , when the matching accuracy rate is $1/4$ (i.e 25%)