

FILE FORMAT FOR ESPRESSO MINIMIZER

1. PLA format - Programmable Logic Array

Given a circuit, how do we describe it in the PLA format?

Consider the following circuit.

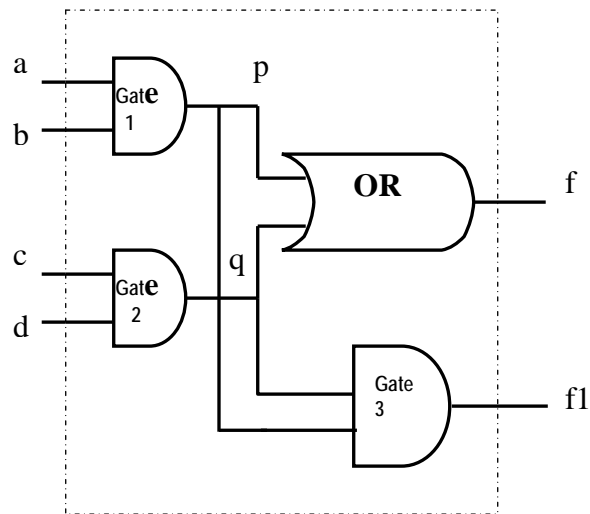


Fig. 1

In the above circuit,

1. Note the number of inputs, it is 4. (a,b,c,d) **{Specified by “.i”}**
2. Note the number of outputs, it is 2. (f, f1) **{Specified by “.o”}**

So, in the pla file we write

```
.i 4  
.o 2
```

 ←PLA file

Naming the inputs and outputs

3. We define the names of the wires in the input.

For the above circuit it is a, b, c, d

4. We define the names of wires in the output.

For the above circuit it is f, f1

```
.i 4
.o 2
.ilb a b c d
.ob f f1
```

←PLA file

Giving the Truth Table

5. After specifying the inputs and outputs, we specify the truth table of the circuit. The number of terms in the truth table is represented by “.p” in the pla file.

A	B	C	D	F	F1
1	1	-	-	1	0
-	-	1	1	1	0
1	1	1	1	1	1

For the above truth table, the last 4 lines in the following snapshot have been added:

```
.i 4
.o 2
.ilb a b c d
.ob f f1
.p 3
11-- 10
--11 10
1111 11
```

←PLA file

Ending the file

6. The end of the file is specified using the notation “.e”.

```
.i 4  
.o 2  
.ilb a b c d  
.ob f f1  
  
11-- 10  
--11 10  
1111 11  
.e
```

Final PLA file