Circuiti Aritmetici *020045*

Progetto di un comparatore binario a due bit

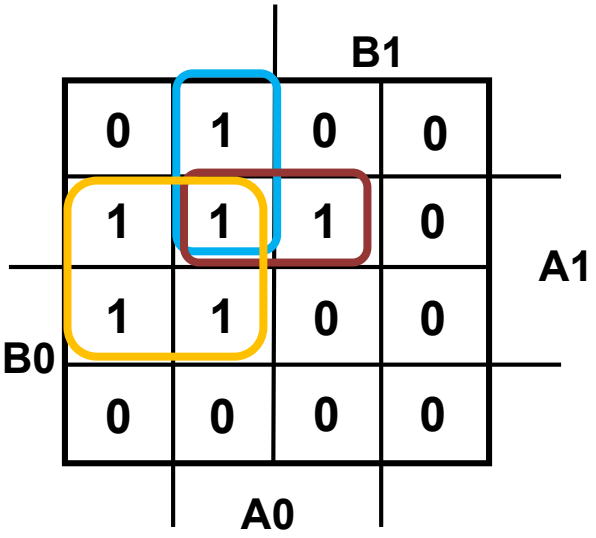
Biundo Mattia 19/10/2022

1) Tavola di verità:

A1	A0	B1	B0	G	E	L
0	0	0	0	0	1	0
0	0	0	1	0	0	1
0	0	1	0	0	0	1
0	0	1	1	0	0	1
0	1	0	0	1	0	0
0	1	0	1	0	1	0
0	1	1	0	0	0	1
0	1	1	1	0	0	1
1	0	0	0	1	0	0
1	0	0	1	1	0	0
1	0	1	0	0	1	0
1	0	1	1	0	0	1
1	1	0	0	1	0	0
1	1	0	1	1	0	0
1	1	1	0	1	0	0
1	1	1	1	0	1	0

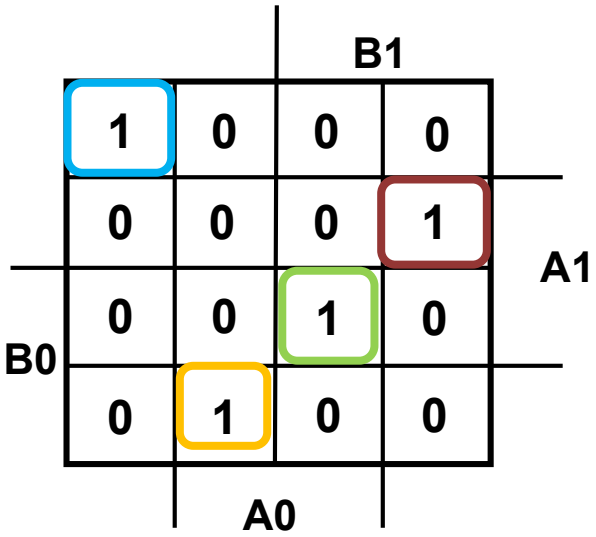
...

2) Mappe di Karnaugh:



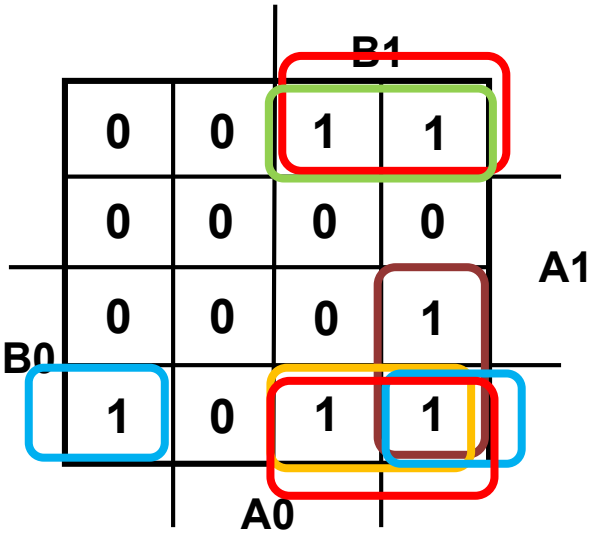
G

G = A1 !B1 + !B0 A0 !B1 + A1 A0 !B0



E

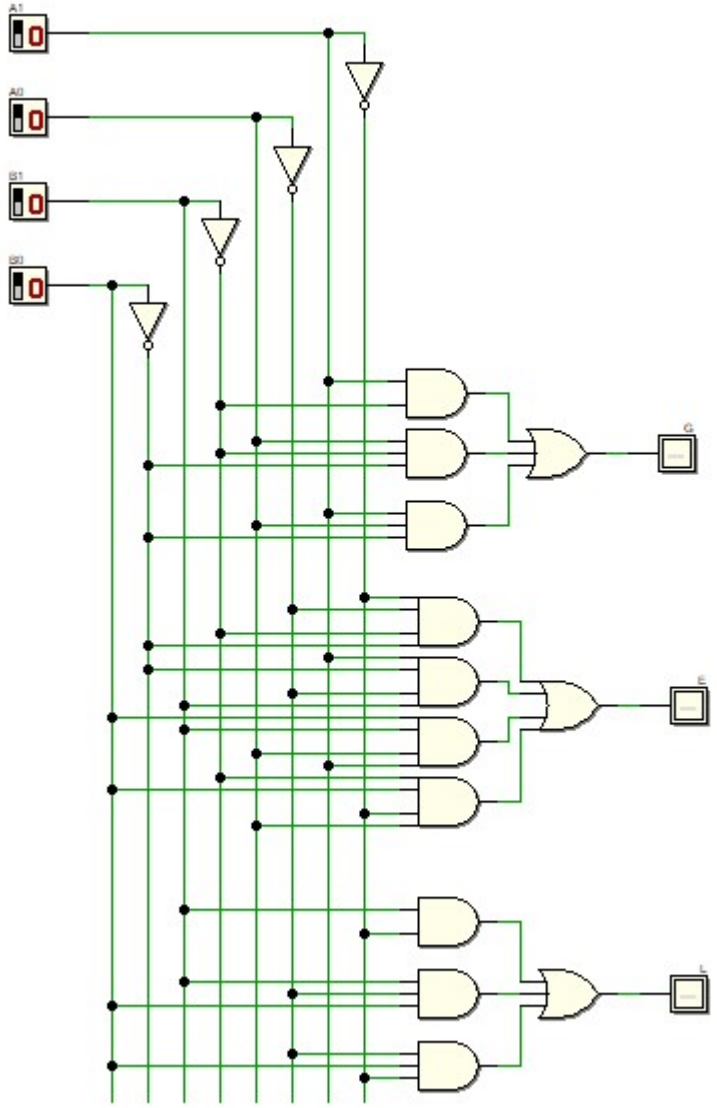
E = !B1 !B0 !A1 !A0 + B1 !B0 A1 !A0 + B1 B0 A1 A0 + !B1 B0 !A1 A0



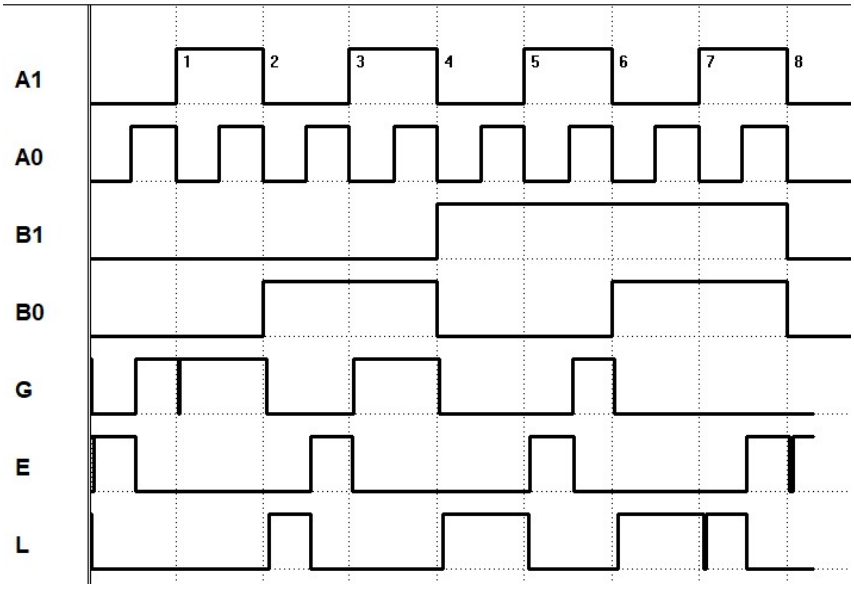
L

L = B1 !A1 + B1 !A0 B0 + !A0 B0 !A1

3) Schema del circuito:



4) Diagramma temporale:



5) Eventuali commenti:

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