Corrections to "MagCAD: A Tool for the Design of 3-D Magnetic Circuits" (vol 3, pg 65, 2017)

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Corrections to "MagCAD: A Tool for the Design of 3-D Magnetic Circuits"

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In [1], Tables 2–5 in the results section report the performance of different logic circuits. Unfortunately, due to a mistake, the bounding box area reported for all circuits is higher than their actual value. Tables 2–5 in [1] are here reprinted with the correct area. Moreover, the bounding box area of the 4-bit RCA and the 32-bit RCA are 105.47 and 2191.77 μm^2, respectively. The authors regret their mistake.

TABLE 2. Performance Analysis for a 2-D Minority Voter.

Minority Voter 2D		
Critical path = 5.82E-7 s		
Bounding Box Area = 3.06 μm^2		
Input pattern ABC	Output O	Latency $[s]$
000	1	2.03E-6
001	1	2.03E-6
010	1	2.03E-6
011	0	1.29E-6
100	1	2.03E-6
101	0	1.29E-6
110	0	1.29E-6
111	0	1.29E-6

TABLE 3. Performance Analysis for a 3-D Minority Voter.

Minority voter 3D		
Critical path = 5.75E-7 s		
Bounding Box Area = 2.45 μm^2		
Input pattern ABC	Output O	Latency $[s]$
000	1	2.01E-6
001	0	2.73E-6
010	1	2.01E-6
011	1	2.01E-6
100	0	2.73E-6
101	0	1.29E-6
110	1	2.01E-6
111	0	1.29E-6

TABLE 4. Performance Analysis for a 3-D Crosswire.

Crosswire 3D		
Critical path = 8.52E-7 s		
Bounding Box Area = 4.29 μm^2		
Input pattern AB	Output OUTA OUTB	Latency $[s]$
00	00	4.52E-6
01	01	3.73E-6
10	10	4.52E-6
11	11	3.73E-6

TABLE 5. Performance Analysis for a 3-D Full Adder.

Full Adder 3D		
Critical path = 6.26E-7 s		
Bounding Box Area = 12.1 μm^2		
Input pattern ABC	Output C_{out} S	Latency $[s]$
000	00	6.05E-6
001	01	3.7E-6
010	01	5.27E-6
011	10	6.05E-6
100	01	5.27E-6
101	10	6.05E-6
110	10	2.91E-6
111	11	5.27E-6

REFERENCES

[1] F. Riente, U. Garlando, G. Turvani, M. Vacca, M. R. Roch, and M. Graziano, "MagCAD: Tool for the design of 3-D magnetic circuits," *IEEE J. Explor. Solid-State Computat. Devices Circuits*, vol. 3, pp. 65–73, 2017.